AMERICAN GAS ASSOCIATION

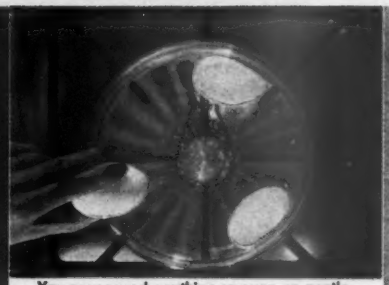
Monthly

FOR THE GAS INDUSTRY *a second national TV show*

(see page 13)

JANUARY
1961

New "Blanket-O-Flame" yours only with GAS, makes a world of cooking difference on this RCA WHIRLPOOL



You never used anything so even, so gentle, so great! New air-cushion "Blanket-O-Flame" burners heat with a *steadiness* cooking never knew before—*shape the heat to fit the pan!* New for 1961, from Gas and Whirlpool!

*A.G.A. Mark ©Am. Gas. Assoc., Inc.

Safety feature! If pilot light ever goes out, tiny "sentry" device shuts off Gas in oven *automatically!*

Easiest to clean! Special grates lift out; *seamless cooktop has sealed-in burners, no crevices*—cleans with a wipe!

Super sensitive Gas Burner-with-a-Brain* *combines Whirlpool's "Blanket-O-Flame,"* new *platinum* temperature control.

Suddenly you're in a new era with this RCA Whirlpool *Gas* range! It gives you *a new way to cook*—heat is gentler, steadier, easier to control—for more perfect results. *Plus* all the "extras"—automatic meat thermometer and rotisserie, clock-controlled oven, Gold Star ease of cleaning. A truly *modern* new Gas range like this, built to Gold Star standards, costs less than you think. Why don't *you* start living in this new era *now?*

AMERICAN GAS ASSOCIATION

Everything's automatic on a range that's won this Gold Star award!

GOLD STAR AWARD • AMERICAN GAS ASSOCIATION, INC.

Live modern...for less...with GAS

Use of trademarks and RCA by Whirlpool Corporation, St. Joseph, Michigan, manufacturers of RCA WHIRLPOOL appliances, authorized by Radio Corporation of America.

This advertisement appeared in PARENTS' MAGAZINE—December, 1960

No, you won't need two TV sets to see both the current gas industry shows—one is on Monday, the other on Tuesday

---

JANUARY, once again, gives us an opportunity to review a year of tremendous and satisfying progress. . . . In President Potter's review, beginning on page 2, not only are new records noted in sales, customers, revenues and construction, but striking advances in research and utilization are described . . . also impressive achievements in practically every other branch of gas industry effort. . . . Continued advances in the LP-Gas industry also are reported for 1960, in the article beginning on page 11. . . . While the statistics for gas appliance sales in 1960 are less bright, the outlook for the decade ahead remains encouraging, according to GAMA's Edward R. Martin . . . See page 9. . . . Continuation of the surprising resurgence of gas lighting in 1960 is described in a round-up starting on page 6. . . . Speaking of research, some space this month is devoted to new developments by member gas companies conducting their own research programs, page 15. . . . In view of the keen and nearly unanimous interest in research shown at the 1960 Convention, and expressed in answer to a follow-up questionnaire survey of the industry, it will be the policy of the MONTHLY to present as many good articles on new research developments as possible in coming months. . . . With this month's cover story, on the gas industry's added TV show, we are, of course, already into 1961. . . . It looks like a promising start.

JAMES M. BEALL
DIRECTOR, PUBLIC INFORMATION

BERNARD KAAPCKE
EDITOR

RICHARD F. MULLIGAN
ART SUPERVISOR

SHARON HURLEY
NEWS EDITOR

EDITORIAL OFFICES:
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N.Y.

CONTENTS FOR JANUARY 1961

FEATURES

GAS SALES IN '61 WILL PASS $6 BILLION MARK—by Lester T. Potter 2
GASLIGHT GLOW GROWS BRIGHTER ACROSS LAND 6
GAINS SEEN FOR APPLIANCES IN '61—by Edward R. Martin . . . 9
LP-GAS SALES UP 10.5 PER CENT OVER PREVIOUS YEAR 11
'LARAMIE' CORRALS WESTERN FANS 13
NEW RESEARCH DEVELOPMENTS WIN PRAISE 15
HAWAII HOST FOR PACIFIC CONFERENCE 17

SECTIONS

ACCOUNTANTS ORGANIZE FOR 1961 (Accounting) 18
CHARLESTON SETTING FOR SPRING CONFERENCE (General Management) 20
SELF-INSURANCE FOR GAS COMPANIES DISCUSSED IN REPORT (General Management) 22
SALESMEN SCHOOLED IN COOLING ART (Industrial and Commercial) 43
50,000 SEE HOTEL SHOW EXHIBITS (Industrial and Commercial) . . 45

DEPARTMENTS

INDUSTRIAL RELATIONS ROUNDTABLE 14
FACTS AND FIGURES 47
MEET YOUR ASSOCIATION STAFF (Robert C. Kluthe) 48
INDUSTRY NEWS 53
HIGHLIGHTS OF CASES BEFORE FPC 58
PERSONAL AND OTHERWISE 60
OBITUARY 63
CONVENTION CALENDAR 63
PERSONNEL SERVICE 64

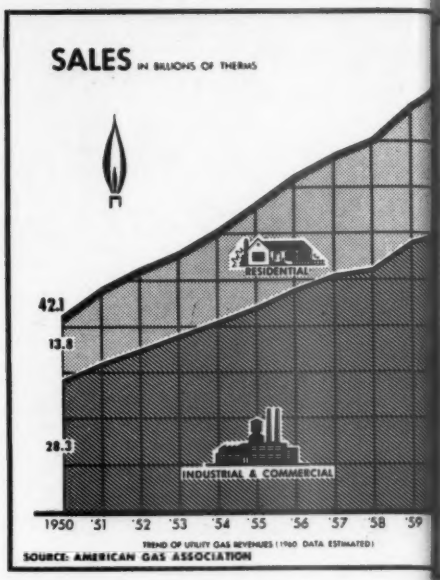
INDEXED BY APPLIED SCIENCE AND TECHNOLOGY INDEX

VOL. 43 NO. 1

• The "American Gas Association Monthly" is published 11 times a year, monthly, except in July and August, when there is a bimonthly issue, by American Gas Association, Inc., 420 Lexington Avenue, New York 17, N. Y. The publication office is located at 73 Main Street, Brattleboro, Vt. Address communications to 420 Lexington Avenue, New York 17, N. Y., including manuscript copy for publication. The Association is not responsible for statements and opinions contained in papers and discussions appearing herein. Cable addresses: American Gas Association, "Amerigas, New York"; American Gas Association Laboratories, "Amerigaslab, Cleveland." Annual subscription: $5 domestic (United States and Canada) and $6 foreign. Second class mail privileges authorized at Brattleboro, Vt.

POSTMASTER: Send Form 3579 to American Gas Association 420 Lexington Ave., New York 17, New York.

Gas sales in '61 will pass $6 billion mark



● *Gas industry continues dynamic growth as sales climb 12 per cent in 1960*

By LESTER T. POTTER

President
American Gas Association
President
Lone Star Gas Co.

The gas utility and pipeline industry set new highs in all areas of activity during 1960, closing the year with increased confidence that its companies will do even more business and experience greater growth in 1961.

Gas industry sales in 1960 climbed 12 per cent, to a record-shattering total of nearly $5.7 billion—and they will pass the $6 billion mark in 1961.

Our 1,400 gas transmission and distributing companies served an all-time peak of 33.5 million customers at year's end. Customers set a new high in gas use, consuming more than 93 billion therms of gas during the year.

While 1960 gains continue the dynamic growth pattern our industry has established in recent years, they actually reflect more than the normal expansion a fuel or energy industry can expect in a rapidly-growing nation with constantly-increasing energy requirements, rising standards of living and higher levels of industrial productivity. These gains present striking evidence of this industry's intensified efforts to consolidate and mobilize its forces for increasingly effective service to present customers and to the consumers of tomorrow.

Today, the gas industry is larger, stronger and better informed than ever. And, by working together through such national organizations as the American Gas Association, we now stand on the threshold of doing the best job yet in defining our future roles and responsibilities as a major supplier of energy.

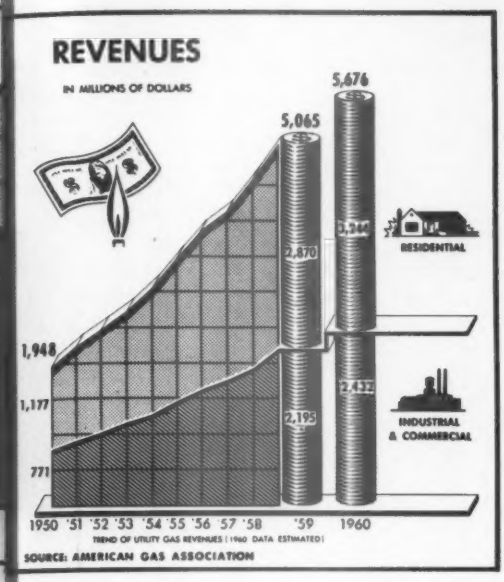
In a most thorough and businesslike way, this industry is projecting itself into tomorrow and, more important, preparing to meet its challenges with the most aggressive and imaginative action programs in the history of the gas business. With these programs, we believe we will create a climate wherein we will achieve more spectacular growth and strength in the Sixties than in the past 100 years.

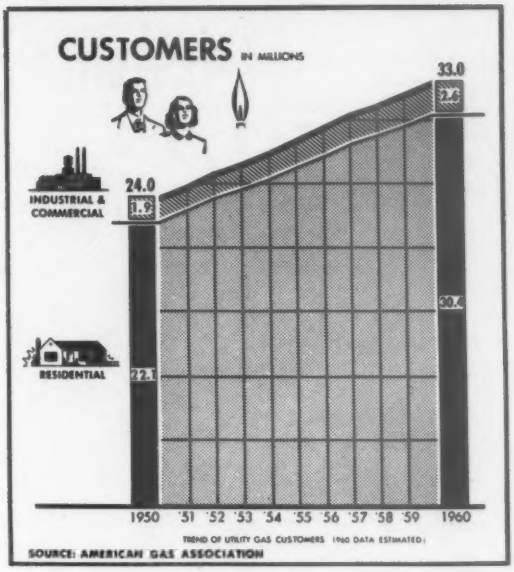
Foremost among these programs is the American Gas Association's Promotion, Advertising and Research Plan (PAR), which spearheads our drive to protect and expand gas markets in the energy industry's most competitive decade. PAR in 1960 invested about $7¼ million in coordinated, hard-hitting national programs in gas sales promotion, research and public information.

PAR promotion and advertising—the powerful and persuasive voice of gas directed to the consumer—serves as the backbone of the industry's advertising, accounting for nearly eight out of every 10 dollars invested in national media on behalf of gas and gas appliances.

The constantly-expanding scope of PAR promotional programs gives greater impact and salespower to local merchandising campaigns of gas utilities and gas appliance dealers, arming them with the newest and most effective weapons for the "battle of the fuels."

Promotion highlights include the production and distribution of new sales aids on behalf of gas air conditioning





mers reach 33.5 million, and gross plant investment approaches $22 billion

equipment, gas refrigerators and Gold Star "top-of-the-line" gas ranges. In addition, intensive promotional effort was focused on the key field of residential gas heating, where more than two-thirds of the industry's 30.4 million domestic customers now heat with gas.

The 14-month-old Blue Star Home program promoting gas-equipped homes now is supported by 135 gas utilities representing nearly 17 million residential customers. We expect utility and manufacturer participation will grow substantially in 1961 because of increased trade advertising and the possible introduction of Blue Star Home advertising directed to consumers.

New Freedom kitchen and laundry exhibits, together with appliance manufacturer displays, appeared in unified gas areas at seven 1960 national trade shows attended by more than 76,000 builders, architects, lumber retailers, plumbing contractors, home economists, educators, school administrators and gas utility representatives.

Through PAR, the Association in 1961 will introduce its first industrial gas promotion program, promoting in depth new gas applications in the metals, textile and chemical industries. A. G. A. will also continue its participation in such industrial and commercial activities as the National Restaurant Show, the American Dietetic Association Show, International Heating and Air Conditioning Exposition, National Hotel Exposition, National Metal Exposition and the American School Food Service Show.

At the same time, industrial and commercial promotion programs will be stepped up in the fields of gas air conditioning, incineration, and commercial cooking and water heating.

PAR's expanded national advertising programs in 1960 demonstrate the healthy spirit of urgency developing over the business of selling gas and gas appliances in the new era of stiffening competition.

The industry's growing determination to maintain and extend its markets is evidenced in positive terms by PAR's response to challenges in the basic load field of home heating. A new consumer campaign, aimed at selling the advantages of gas for heating, was added to the gas industry's advertising program in 1960.

During the fourth quarter of the year, more print and television advertising was devoted to heating than was used in the years 1958 and 1959 combined. Campaigns on behalf of gas heating and gas air conditioning will be greatly expanded in 1961, making this the second most important gas advertising effort of the year in terms of dollars invested.

The Gold Star Range program drew the largest share of the industry's national advertising effort in 1960 and will continue to hold the spotlight in 1961. More than half a million dollars of A. G. A. and Gold Star funds were spent in 1960 to advertise in leading women's service, shelter and general consumer magazines and in builder, home economist and appliance dealer publications.

Strong gains also are indicated in PAR's industrial and commercial advertising, which in 1960 carried the gas message to influential readers of nearly 40 magazines with combined circulations totaling 2¼ million.

A major factor helping to accelerate this program was the

increased interest shown by manufacturers in A. G. A.'s industrial and commercial cooperative program. Thirteen manufacturers now participate, nearly doubling our activities in comfort heating and cooling, water heating, and commercial cooking. Cooperative budgeting is expected to extend the program to incineration and industrial processing in 1961.

Additional impact for PAR's national advertising and promotion is provided by the PAR Public Information program, now in its seventh year of building a more favorable climate for gas.

As a follow-up to A. G. A.'s 1959 national public opinion survey of the gas industry, Public Information in 1960 spearheaded a comprehensive, objective audit of the industry's public relations resources and needs. Armed with this new knowledge, A. G. A. has charted a 1961 program of accelerated action for public relations action at all levels of the industry.

During 1960, increasingly greater emphasis was placed on distributing facts on government in gas, the "National Fuels Policy" issue, investor relations, employee information and recruitment. A series of five regional public relations workshops included the industry's first U. S.-Canadian PR "idea clinic."

The fourth annual A. G. A. Public Relations Achievement Award was won by Minneapolis Gas Co., which also earned top honors in the Community Relations category. The Minneapolis utility's winning entry was based on a program to strengthen the company's image in its community. Central figure in the program was an exclusive symbol known as "Minnegasco," a little Indian maiden with a bright blue flame in her headband instead of the usual single feather.

Research conducted under PAR in 1960 increased to include nearly 85 projects in gas air conditioning, gas operations, pipeline research, domestic, industrial and commercial utilization, and special research. Outlays for research, which climbed from $1.8 million in 1959 to about $2.6 million in 1960, are expected to reach $3 million in 1961.

Solar Aircraft, in cooperation with PAR Research, is developing a natural gas turbine which the gas industry views as a prime mover with tremendous potential for use in the residential and commercial markets. Turbines fueled with natural gas may be used to drive compressors, pumps, generators and air conditioners, and the exhaust heat also may be harnessed for heating and absorption refrigeration uses.

Other developments among manufacturers cooperating with PAR include the Worthington Corporation's work on a 50-ton gas engine-driven air conditioning system for industrial and commercial applications; field-testing of new gas-fueled internal combustion engines by D. W. Onan & Sons; Continental Motors' continuing development of a gas engine-driven heat pump for residential use; and the expansion of Continental's line of commercially-available internal combustion engines fueled with natural gas.

In pipeline research, PAR researchers now are completing the industry's first comprehensive study of noise abatement, a 3½-year program which concludes in mid-1961 with a series of field tests at pipeline compressor stations.

PAR pipeline research also has developed prototype equipment for the non-destructive inspection of steel pipe, which will be field-tested in 1961. Completed projects include testing studies on pipeline flow efficiency, development of flow tracer techniques, and field-testing of the foam method for removing water from flooded gas wells.

Gas operations research projects included continuing development of base load processes for producing synthetic gas from coal and oil. Emphasis now is being shifted to hydrogasification, wherein hydrogen is reacted directly to produce a high-Btu gas equivalent to natural gas.

New emphasis also was placed on gas distribution system development during the year. Researchers note significant progress in pinpointing leaks by sonic methods, the development of techniques for evaluating plastic pipe and internal leak sealants, development of a new method for the quantitative analysis of natural gas odorizing compounds, and a new concept for liquefied natural gas storage.

In commercial and industrial utilization research, PAR's 1960 projects indicated a trend toward increased use of gas-fired infrared burners in these fields, and improvements in techniques for baking foundry cores. During the year, important studies were undertaken in the field of commercial kitchen ventilation, and studies also were initiated on the reconstitution of frozen foods.

Among domestic utilization research projects carried out by the A. G. A. Laboratories was the development of prototypes of a high-recovery, non-integral water heater installation above floor level; a direct-fired gas baseboard convector; a sealed combustion chamber bathroom heater; and a high-speed oven and broiler unit incorporating infrared burners.

The Laboratories also developed prototypes of a windproof gas appliance pilot; a transistorized, battery-ignited gas range requiring no pilot; and a self-energizing electric ignition system for a gas-fired room heater in which the battery can be recharged thermoelectrically.

While the industry gathered new sinew and muscle through PAR's 1960 programs in gas sales promotion and research, industry leaders mobilized to lay down new guidelines for the continuing development of the gas business in its most challenging decade.

During the year, A. G. A.'s Gas Industry Development Committee carried out a broad study of all phases of the industry to determine where the industry is going and to recommend what the long-range goals should be.

From this study is evolving an intensified program for gas industry action, as well as plans to achieve the recommended goals. These goals are being designed to meet the conditions of today and the foreseeable future. Their accomplishment will constitute progress toward improving still more the position of the gas industry and its service to the public.

Gas use increases in 1960

As the industry set out to define its future course, the nation's gas companies were advancing to unprecedented highs in sales, revenues and number of customers served.

Gas was delivered to an average of 33 million residential, commercial and industrial customers in 1960, compared with 32.1 million the previous year. We expect to serve 34.1 million in 1961, and A. G. A.'s long-range forecasts indicate customers will increase steadily throughout the Sixties, climbing to at least 43 million by 1970.

The nation's consumption of gas continued to advance in 1960, reaching a new high of 93.3 billion therms—twice the amount used 10 years ago. The year's gain represents a 6.1 per cent increase over 1959's 87.9 billion therms.

The strongest gains during the year were scored in the residential and commercial markets. Sales to domestic cus-

tomers increased 10 per cent, to nearly 33 billion therms, and returned revenues of some $3.2 billion. An average of 30.4 million residential customers were served during 1960.

Gas also strengthened its position as the major home heating fuel. Residential heating customers currently total about 21 million, up from 19.5 million a year ago. We expect this number to exceed 22 million in 1961 and 32.5 million by 1970.

Our sales to commercial gas customers showed a 13.5 per cent year-to-year gain, reaching 9.4 billion therms by December 31. Revenues of nearly $736 million compare with $633 million in 1959. Commercial consumers served at year's end totaled 2.5 million.

Gas used by industrial consumers also showed improvement in 1960, despite the general slackening in the nation's industrial activity which characterized much of the year.

Industrial sales totaling nearly 47 billion therms were up 3 per cent and accounted for half of all gas industry sales. Revenues of $1.56 billion compare with $1.43 billion in 1959.

Total gas industry revenues from sales to ultimate consumers, which rose from $5,065 million in 1959 to $5,676 million in 1960, will increase to an estimated $6,006 million in the coming year. By the end of the decade, sales are expected to produce annual revenues of more than $11 billion.

Gas industry construction

All previous construction records fell during the year, when gas companies spent almost $1.9 billion to expand their systems. Prospects are even better for 1961, when construction outlays will soar to more than $2.2 billion.

Completion of the $193 million Transwestern Pipeline Co. transmission line from West Texas to California was a major construction development in 1960. The new 1800-mile pipeline now makes substantially larger volumes of gas available to meet the rapidly-mounting requirements of consumers in Southern California.

Through this and other expansion projects, our industry extended its pipeline and utility main network by approximately 29,000 miles, to a new total of 629,000 miles.

Following significant and long-awaited decisions by regulatory authorities in Washington and Ottawa, the gas industry took giant steps in 1960 toward joining Canadian natural gas fields with markets in the United States. Construction is underway or planned on at least four U. S. pipelines, through which more than one billion cubic feet of gas per day will be imported from Canada during 1961.

First of the new links opened is a 565-mile system of trunk pipelines and laterals built by Midwestern Gas Transmission Corp. Canadian gas now flows through the company's Minnesota and Wisconsin lines, supplied from a Trans-Canada Pipe Lines connection at Emerson, Manitoba.

Construction also has started on the Pacific Transmission Company's $133 million 614-mile line, which will carry natural gas from the Idaho-British Columbia border to the facilities of Pacific Gas & Electric Co. in California.

New pipelines or extensions to the Canadian border also are being built by Montana Power Co. and El Paso Natural Gas Co. In addition, Tennessee Gas Transmission Co. has applied for Federal Power Commission approval to import Canadian gas at Niagara Falls.

(Continued on page 50)

Sales and revenues

TOTAL GAS UTILITY INDUSTRY
CUSTOMERS, SALES AND REVENUES

Preliminary 1960 Compared with 1959

	1960	1959	Per Cent Change
CUSTOMERS (at December 31)			
Residential	30,791,900	30,062,000	+ 2.4
Commercial	2,490,300	2,453,000	+ 1.5
Industrial	140,100	137,100	+ 2.2
Other	36,000	37,000	—
Total	33,458,300	32,689,100	+ 2.4
CUSTOMERS (Average)			
Residential	30,370,300	29,529,600	+ 2.8
Commercial	2,422,500	2,363,900	+ 2.5
Industrial	138,000	136,300	+ 1.2
Other	36,100	36,100	—
Total	32,966,900	32,065,900	+ 2.8
SALES (Thousands of Therms)			
Residential	32,756,000	29,739,100	+10.1
Commercial	9,393,100	8,274,500	+13.5
Industrial	46,980,500	45,631,100	+ 3.0
Other	4,180,700	4,272,500	—
Total	93,310,300	87,917,200	+ 6.1
REVENUES			
Residential	$3,243,839,000	$2,870,473,000	+13.0
Commercial	735,657,000	632,665,000	+16.3
Industrial	1,559,933,000	1,431,237,000	+ 9.0
Other	136,331,000	130,853,000	—
Total	$5,675,760,000	$5,065,228,000	+12.1

NATURAL GAS
CUSTOMERS, SALES AND REVENUES

Preliminary 1960 Compared with 1959

	1960 Preliminary	1959	Per Cent Change
CUSTOMERS (at December 31)			
Residential	28,834,000	27,588,000	+ 4.5
Commercial	2,362,000	2,286,000	+ 3.3
Industrial	131,000	126,000	+ 4.0
Other	35,000	36,000	—
Total	31,362,000	30,036,000	+ 4.4
CUSTOMERS (Average)			
Residential	28,123,000	26,845,900	+ 4.8
Commercial	2,273,000	2,179,700	+ 4.3
Industrial	127,000	123,800	+ 2.6
Other	35,000	34,800	—
Total	30,558,000	29,184,200	+ 4.7
SALES (Thousands of Therms)			
Residential	31,090,200	28,026,900	+10.9
Commercial	9,108,700	7,979,000	+14.2
Industrial	46,627,700	45,260,100	+ 3.0
Other	4,134,500	4,251,500	—
Total	90,961,100	85,517,500	+ 6.4
REVENUES			
Residential	$3,004,399,000	$2,620,352,000	+14.7
Commercial	696,423,000	590,534,000	+17.9
Industrial	1,529,369,000	1,399,632,000	+ 9.3
Other	134,054,000	129,135,000	—
Total	$5,364,245,000	$4,739,653,000	+13.2

Remarkable comeback of gas lights continues as thousands light up for city streets, homes, businesses, many other sites

In Dallas, Texas, "The Gasliters" play Christmas music by gaslight

In Oklahoma City, gas lights line approach to drive-in theatre

Gaslight glow grows brighter across land

Gas lights are glowing again on the tree-lined streets of New Jersey's southernmost city, Cape May, for the first time in some 50 years.

Their installation typifies a nationwide gaslight resurgence in which dozens of cities have put in new gas street lights, returned old ones to service, or abandoned plans to retire their picturesque gas-burners.

Thirty Welsbach gas lights have been installed by the New Jersey Natural Gas Company in a four-block downtown area of Cape May. More may be added elsewhere in the city next year.

While the gas lights harmonize with the neighborhood's predominantly Victorian architecture, more than nostalgic appeal led city officials to contract for their installation. The electric lights they replaced were mounted on tall standards, and heavy tree foliage reduced their illuminating value. The new gas lamps, on nine-foot posts, provide greater horizontal light distribution.

The first prediction of a gas light revival was made in mid-1957 by C. S. Stackpole, A. G. A.'s managing director. Addressing executives of a gas and electric company in upstate New York, he declared, "Don't you power men panic, but gas lighting is coming back!"

And come back it did, with greater vigor than even the most optimistic gas men expected.

Today, estimates of the total number of gas lights in service run as high as three-quarters of a million. The number used outdoors far exceeds the record set in the peak gas lighting year of 1914, when some 300,000 gas burners illuminated the streets of America's cities and villages.

Behind the current revival is aggressive selling by manufacturers and gas utility companies, the enthusiasm of civic and merchants' organizations, and the rediscovered old-time charm of the gas

This cluster, fueled by LP-Gas, adorns a Flemington, N. J. farm

Gaslights are part of a Worth Street, New York, restoration

In 1960, gas lamps were relit in residential Cape May, N. J.

Tourist town of East Tincup, Colorado, has installed gas lamps as part of an Old West historical re-creation

This roadside restaurant with its gaslit grounds is typical of commercial establishments joining trend

Historic Gettysburg, Pa., has re-installed gas street lights

lights themselves.

One of the first of the new wave of street light installations was made in April, 1958, when 64 gas lamps replaced electric lights around the plaza in the heart of Albuquerque's historic Old Town.

Seven months later, Martha Raye lighted gas lamps along Pittsburgh's Lower Oliver Ave. Lights reclaimed from Baltimore streets were installed there at the request of owners of the avenue's fashionable shops.

When the Pittsburgh installation was completed, a local gas company sales executive sent the American Gas Association a large electric bulb, mounted on an oak plaque. The "trophy" was inscribed: "Enemy light bulb captured during the 'Battle of the Fuels,' Lower Oliver Ave., Pittsburgh, Nov. 17, 1958. Replaced by gas street light."

In June, 1959, old fringe-top gas lights found in Orange, N. J., were moved to New York City and installed along Worth St. The downtown Manhattan street is the heart of the textile district, where a number of fabrics manufacturers have restored their buildings to look as they did in Victorian days.

While such cities as Baltimore and Philadelphia have retired thousands of gas street lights in recent years, their disappearance has offered small comfort to gas industry competitors. Instead of being scrapped, most of the lights have merely been relocated.

More than 30 lamps from Baltimore were moved cross-country, to Anaheim, Calif. They now cast their soft-as-moonlight glow in Disneyland's "Main Street, U.S.A." Fifty others will light courtyards of a $2 million apartment development in Richmond, Va.

Dozens have been installed along the streets of "Gaslight Village," a recreated small town of Gay Nineties vintage at

D. W. Weir, Arkansas Louisiana Gas Co., I. Horowitz, Universal Manufacturing Co., examine Arkla gaslight destined for movies

Gaslights in parking and driveway areas and around swimming pool make Flamingo Motel in Amarillo, Texas, a showplace

Lake George, N. Y., and in "Freedomland," a new amusement center in The Bronx, N. Y.

In the Little Rock area, gas lights the three-block-long West Seventh St. "furniture row," the streets of a 400-home subdivision, the mall of the Arkansas state capitol, and the grounds of the state police headquarters at nearby Hope.

Lamps rescued from various U. S. cities have been installed along historic Bay St. in St. Augustine, Fla., and at the northern approaches to the resort city of Asbury Park, N. J.

And old gas lights that once brightened the streets of London in Queen Victoria's reign now shine on the main streets of "Stonegate," a new 1,000-home development in Bedford, Texas.

So great is the demand for gas street lamps that several manufacturers—including Arkla Air Conditioning Corp., Little Rock, and Hadco Aluminum Products Co., Littlestown, Pa.—have turned to producing replicas of the old fringe-top lights known as "boulevard" models.

At least 18 other manufacturers are making gas lamps for street and private use, and a Pittsburgh gas utility company serves as U. S. distributor for lights manufactured to its specifications in England.

A significant sign of the growing market for gas lights appeared earlier this year when America's pioneer manufacturer of gas lights—the 83-year-old Welsbach Corp., of Philadelphia—returned to production after an absence of more than 25 years. Most of the old and new gas lights in use today incorporate a type of incandescent mantle invented by Baron Carl Auer von Welsbach and introduced in the mid-1890's by the company which bears his name.

A Welsbach spokesman reports his company still serves some 6,500 old gas street lights in at least 30 cities. One of these lamps, on Oak Bend Ave. in Llewellyn Park, N. J., stands in front of the home of Thomas A. Edison, inventor of the electric light.

Welsbach officials say the largest concentration of old gas street lights is in northern New Jersey, where about 4,000 are in use. Nearly 2,000 light the streets of Cincinnati. The Chicago suburban communities of Riverside and Lake Forest have about 550, and nearly 400 light streets in Worcester and Newton, Mass.

Today's largest producer of gas lights for both street and residential-commercial use is the Arkla Gaslite Division, part of the huge Shreveport-based Arkansas Louisiana Gas Co. This complex of aggressive companies not only distributes natural gas but manufactures such diverse products as gas air conditioners, rocking chairs, cement, chemicals and horse-drawn buggies.

In 1958, Arkla contracted with Welsbach to purchase and distribute the Philadelphia company's entire output of reconditioned gas street lights for one year. In the meantime, Arkla also tooled up to manufacture its own lights, including reproductions of the Welsbach fringe-top model.

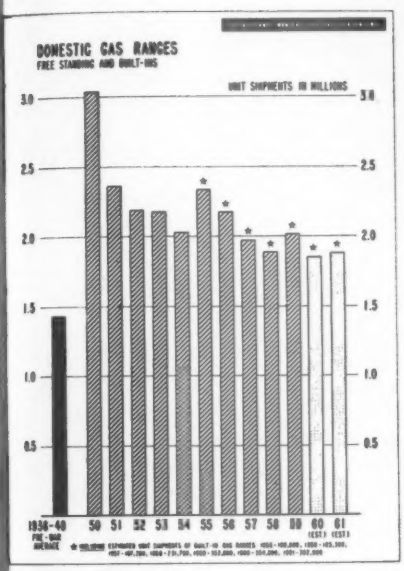
Besides Arkla, Welsbach and Hadco, companies currently manufacturing gas lights include American Lantern and Manufacturing Co., Cleveland; Breese Industries, Inc., Santa Fe; Bruest, Inc., Independence, Kan.; Chattanooga Royal Co., Chattanooga; and The Coleman Co., Wichita.

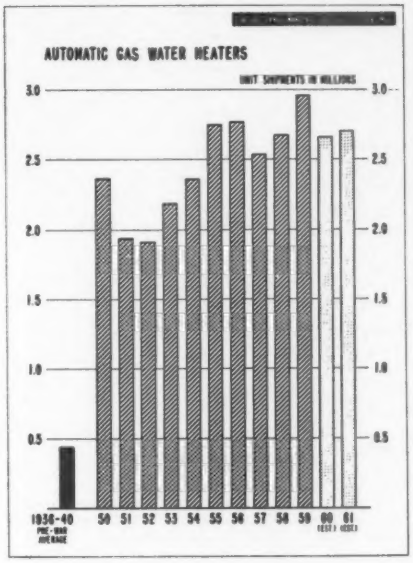
Also Craftsman Copper Co., Inc., Costa Mesa, Calif.; Equitable Gas Co., Pittsburgh; Falcon Manufacturing Co., Inc., Dallas; Humphrey Products Div., General Gas Light Co., Kalamazoo, Mich.; Honolulu Gas Co., Ltd., Honolulu; Modern Home Products, Russell, Ill.; and Moonglow Gas Light Co., San Antonio.

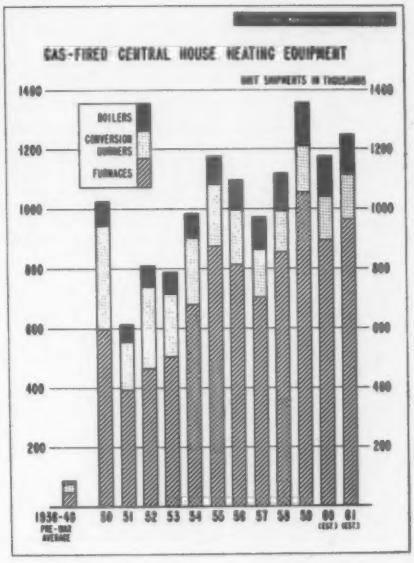
Other gas light manufacturers include Roberts-Gordon Appliance Corp., Buffalo; Sunderman Manufacturing Co., Sioux Falls, S. D.; Sunshine Mantle Co., Chanute, Kan.; U. S. Products Co., Santa Fe; Valley Manufacturing Co., Valley, Neb.; and Walton Manufacturing Co., Dallas.

Even this list may be incomplete as still other companies are reported rushing to climb onto the gaslight bandwagon.

Gains seen for appliances in '61







By EDWARD R. MARTIN

Director of Marketing and Statistics
Gas Appliance Manufacturers Association

Generally speaking, most economists now seem to feel that the economy will again move forward beginning in the second half of 1961.

The current year, 1960, has seen a decline in residential construction, a slowdown in retail sales and, during the third quarter, a drop-off in Gross National Product—the sum total of all the goods and services produced.

The sales of household appliances and equipment followed the trends of the general economy and were, during 1960, substantially below the levels of the previous year. For example, sales of all major gas appliances and equipment, combined, were off by about 11 per cent.

Now, looking to 1961, and despite the anticipated up-turn during the second half, it appears that for the year as a whole, aggregate sales of gas appliances and equipment will be only about two per cent more than for the present year.

With regard to 1960 sales of gas appliances and equipment, it is interesting to note the change in thinking of manufacturers during the past twelve months.

In December of 1959, manufacturers felt that 1960 sales would be increased slightly, by 0.7 per cent. In June of 1960, their thinking was that this year's aggregate volumes would fall 5.6 per cent below 1959 levels. It is now estimated that across-the-board gas appliance and equipment sales will be 11.5 per cent below the levels of the previous year.

Looking at the anticipated sales of 1961, gas appliance and equipment manufacturers again adjusted their thinking in tune with the trends of current and expected economics.

In June of 1960, manufacturers looked for 1961 sales to be increased by 5.1 per cent. This somewhat limited optimism has been modified to the extent that they now expect an aggregate increase of 2.3 per cent.

Just a year ago, in our "General Business Outlook" for 1960, we pointed out there were too many adverse factors at work to get the "soaring sixties" off to a flying start. We also pointed out:

1. That the next ten years, as a decade, will be typified by relatively substantial and progressive increases in consumer demand rather than typified by spectacular and sudden sales increases; and

2. That the possibility of a "moderate recession" during the early sixties could not be entirely discounted.

As of now, there appears little, if any, reason to change these viewpoints. A recent and authoritative financial newsletter, in discussing current conditions, stated: "some economists believe we are in a recession, others that we are not in one but are heading for one, and still others that we are neither in nor heading for one."

The fact remains that 1960 constituted a period of depressed household appliance and equipment sales and, as earlier stated, included fall-offs in housing starts, retail spending, and a third-quarter decrease in gross national product. Thus, the decision as to a recession, or the absence of one, seems to be a matter of degree and the specific period in our economic history which you select as a basis for comparison.

To the manufacturers of household appliances and equipment, and to others whose business volumes are importantly related to the new home market, it would take strong argument to convince them that their industry is not in a recession, for based upon most current data comparing 1960 with 1959 volumes, we find that:

Housing starts are estimated to be down 15.8 per cent in 1960;

Gas range sales for the year will be down 8.3 per cent;

Electric range sales for the first 10 months are down 8.3 per cent;

Gas water heater sales for the year will be down 9.9 per cent;

Electric water heater sales for the first 10 months are down 19.9 per cent;

	1961 (Consensus)	1960 (Estimated*)	Per Cent Change
Free Standing Gas Ranges	1,483,600	1,489,300	— 0.4
Built-Ins (oven-broiler units)	392,900	354,800	+10.7
GAS RANGE TOTAL	1,876,500	1,844,100	+ 1.8
Automatic Gas Water Heaters	2,702,300	2,662,400	+ 1.5
Warm-Air Furnaces	964,000	897,100	+ 7.5
Boilers	149,600	143,200	+ 4.5
Conversion Burners	134,200	134,700	— 0.4
GAS CENTRAL HEATING TOTAL	1,247,800	1,175,000	+ 6.2
Gas Vented Recessed Wall Heaters	365,800	369,600	— 1.0
Gas Floor Furnaces	81,800	86,000	— 4.9
Gas Direct Heating Equipment	1,219,600	1,192,200	+ 2.3
Gas Incinerators	46,400	42,500	+ 9.2
Gas Unit Heaters	143,300	140,400	+ 2.1
Gas Duct Furnaces	28,900	26,200	+10.3

* Ten months actual, two months estimated.

Not included in the foregoing table are gas clothes dryers and commercial gas ranges which, based upon a limited number of replies, are expected to increase 10.5 per cent and 2.9 per cent, respectively.

Gas central househeating sales for the year will be down 13.4 per cent; and

Oil central househeating sales for the first 10 months are down 13.4 per cent.

For the gas appliance and equipment manufacturing industry, there are several bright spots on the horizon. It is significant that while 1960 sales were down, they were not down to the extent of new housing starts. It is of further significance that in the areas of major household appliance or equipment sales in which we are competitive, specifically the areas of ranges, water heaters, central heating equipment and clothes dryers, the gas "share of market" was increased during the past year.

As for 1961 as a whole, while no spectacular upturns appear imminent, there seems to be an excellent chance that the general economy will improve in the second half, thus creating increased sales opportunities for the gas appliance and equipment manufacturing industry.

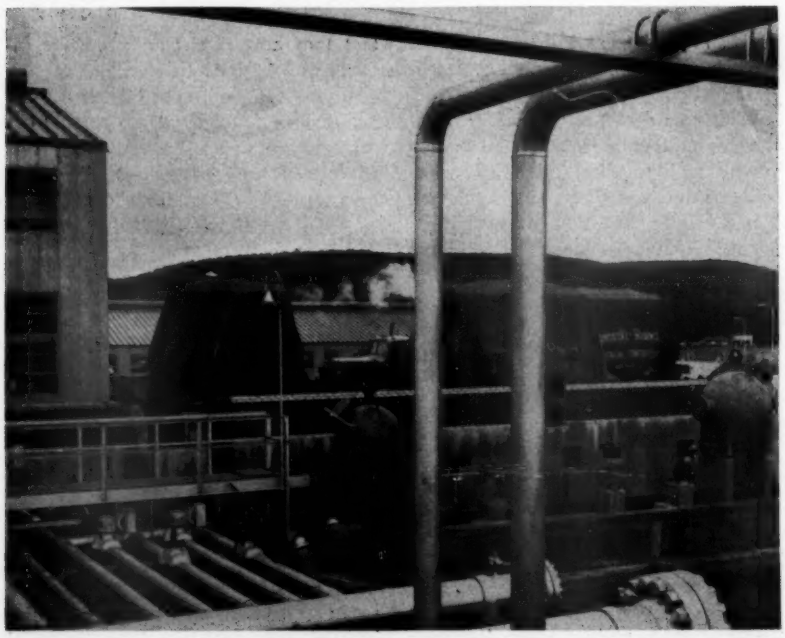
During the coming year, 1961, and in comparison with 1960, increases are expected in the following gas appliance and equipment categories:

Built-in gas ranges;
Automatic gas water heaters;
Gas warm-air furnaces;
Gas boilers;
Gas direct heating equipment;
Gas incinerators;
Gas unit heaters;
Gas duct furnaces.

Sales of free-standing gas ranges are expected to decrease slightly, but this will be more than offset by increased sales of built-ins.

Sales of conversion burners, vented recessed wall heaters and floor furnaces are also not expected to reach 1960 levels.

Cooperating firms add peak load facilities



Three gas compressor engines are being added to facilities at the Leidy underground storage pool, a cooperative venture of Texas Eastern Transmission Corporation, Transcontinental Gas Pipe Line Corporation, and New York State Natural Gas Corporation. Facilities will furnish peak load winter gas

GEO. R. BENZ

W. F. DeVOE

A. F. DYER

LP-Gas sales up 10.5 per cent over previous year

By GEORGE R. BENZ
W. F. DeVOE
A. F. DYER

During its thirty-five years of recorded history the LP-Gas industry has consistently registered strong (and often amazing) increases in "growing up" to a mature, major fuel industry. Nineteen-sixty saw the LP-Gas industry reach another milestone in its mature growth with sales approaching 10 billion gallons.

Summary of 1960 LP-Gas sales

Total—In 1960 LP-Gas sales continued to rise with an apparent increase of 941,000,000 gallons which sent total sales to an estimated 9,860,000,000 gallons. This is 10.5 per cent over 1959. While not as spectacular as the 19.5 per cent gain of 1959 over 1958, it is enviable when compared with most other industries in 1960.

Domestic and Commercial—Sales were up an estimated 393,000,000 gallons or 10 per cent above 1959 to 4,328,000,000 gallons. Although this is a substantial gain over 1959, it falls short of the 19.5 per cent increase of 1959 over 1958. Again this year, domestic and commercial sales kept pace with the total industry growth.

Motor Fuel—The sale of LP-Gas for motor fuel increased an estimated 6 per cent to a total of 943,000,000 gallons.

Industrial and Miscellaneous—Portions of this category decreased as the result of natural gas expansion while others exhibited offsetting gains. The estimated total sales were about the same as in 1959—871,000,000 gallons.

Gas Manufacturing—The sale of LP-Gas for gas manufacturing continued to decline by about 25 per cent to an estimated total of 137,000,000 gallons.

Chemical Manufacturing—The manufacture of chemicals consumed an estimated total of 3,031,000,000 gallons of LP-Gas which is an increase of 20 per cent over 1959. This category exhibited the greatest growth in the industry this year.

Rubber Components—The sale of LP-Gas for use in the manufacture of synthetic rubber increased a modest 7 per cent in view of the spectacular increase of 38.2 per cent of 1959 over 1958. The total sales in 1960 were approximately 550,000,000 gallons.

The largest market for LP-Gas is still sales to domestic and commercial customers. The trend of these sales continues to increase. The sales were 3,294,000,000 gallons in 1958 and 3,935,000,000 gallons in 1959. In 1960 the sales were 4,328,000,000 gallons which is an estimated 10 per cent increase over 1959.

Domestic and Commercial sales accounted for 44.1 per cent of the LP-Gas market in 1959 and 43.9 per cent in 1960. This slightly downward trend is expected to continue. The reason for

(This report on the LP-Gas industry is prepared annually by Phillips Petroleum Company. Mr. Benz is manager, engineering department; Mr. DeVoe is manager, LP-Gas sales, sales department; and Mr. Dyer is technical representative, engineering department.)

the downward trend, in spite of the yearly increases in sales, is the increasing percentage being used for chemical manufacturing.

The 10 per cent increase in Domestic and Commercial sales in 1960 resulted from increases in the use of LP-Gas for home heating, cooking, water heating and other domestic uses, plus various agricultural uses.

The most important factor in domestic growth continues to be home heating "beyond the mains." Weather, of course, is the greatest influence on this market. The trend to increased use of LP-Gas for home heating is expected to continue as tank leasing programs, more efficient transportation and similar factors make LP-Gas more competitive with other fuels.

Agricultural uses of LP-Gas continue to increase. Besides being used for motor fuel, it was used to a larger extent for crop drying and flame cultivating. It continues to be used extensively for tobacco curing, and many other agricultural uses.

LP-Gas appliance sales in 1960 fell short of the 1959 sales volume, as did gas appliances in general. The decrease reflected a general tightening of consumer buying and fewer new housing starts.

Domestic LP-Gas range sales declined to about 370,300 units, a 13.5 per cent decrease when compared to approximately 428,000 units in 1959. This volume represents 20 per cent of all domestic gas range sales—the same as in 1959. "Built-in" LP-Gas unit sales held about even with the 1959 figure of 74,000 units.

Approximately 330,900 automatic LP-Gas water heater units were sold in contrast to about 353,000 units sold in 1959—a little over 6 per cent decrease. The 1960 LP-Gas unit sales volume represents about 12 per cent of all gas water heater sales as compared to 15 per cent in 1959. The competitive situation in this market was exceptionally keen during the year.

Warm-air LP-Gas furnace sales showed a decrease of about 26 per cent. The 1960 sales were about 74,000 units compared to approximately 100,000 units in 1959. The warm-air LP-Gas furnace sales were about 8 per cent of the total sales of these units.

Vented recessed LP-Gas wall heaters were off to about 67,300 units in contrast to sales of about 80,000 units in 1959—a decline of nearly 16 per cent. The LP-Gas unit sales represented 18 per cent of the total gas vented recessed wall heaters compared to 17 per cent in 1959.

Sales of LP-Gas direct heating units fell off 17 per cent to about 330,600 units in 1960 as compared to 400,000 units in 1959. The LP-Gas direct heating units were about 27 per cent of the total gas direct heating units, the same percentage as in 1959. About 24,100 LP-Gas floor furnace units were sold compared to over 29,000 units sold in 1959—nearly a 17 per cent decrease. LP-Gas floor furnace sales represented approximately 28 per cent of all gas floor furnaces sold as compared to nearly 30 per cent in 1959. The proportion of LP-Gas dryers to total gas dryers sold in 1960 increased about 4 per cent over 1959; however, total sales of all gas dryers fell short of the approximately 486,000 units sold in 1959.

Gas-fired incinerator sales totaled about 44,800 compared to approximately 43,800 units in 1959, a gain of over 2 per cent. The 1960 LP-Gas incinerator sales volume represented a little more than 3 per cent of all sales of gas-fired incinerators.

Total sales of gas air conditioners, including dual heating and cooling units, are reported as 14,000, up 40 per cent over 1959 sales. While only a small percentage of these were LP-Gas fired, this percentage should increase with increased promotional work in the future. It is reported that at least ten of the larger LP-Gas distributors took advantage of the sales and service training programs offered by the leading air conditioner manufacturers.

LP-Gas motor fuel continues to increase but at a moderate pace. The 1960 sales gained an estimated 6 per cent over 1959. Interest in motor fuel usage remains high with emphasis primarily on industrial trucks, farm tractors, irrigation engines, other stationary engines and local truck operations.

As in the house heating market, the weather is the dominant factor in the principal motor fuel markets. Heavy losses in the irrigation load occurred in several areas due to excessive moisture throughout the growing season. Gains, however, were noted in other areas, particularly in the Northwest.

Excessive moisture also had its effect on the farm tractor market. Although this volume continues to increase, competitively priced diesel tractors offer a serious threat to this market.

For about the fifth consecutive year, the fastest growing use for LP-Gas motor fuel is the industrial lift truck market.

Nonuniformity of state special fuel tax laws and lack of available supplies of LP-Gas motor fuel on principal highways throughout the country have been handicaps in promoting the sale of motor fuel for highway use. The volume sold through service stations continues to increase but at very moderate rate. The cargo truck refrigeration market has been adversely affected because of insufficient refueling outlets. There is evidence that diesel fuel refrigeration units are increasing in number primarily because fuel is more readily available.

The volume of LP-Gas used as motor fuel is very difficult to pin down. It is often included with general agricultural or industrial uses in reports and surveys. Hence, the statistics are often subject to question.

Industrial and miscellaneous use of LP-Gas in 1960 showed little change from 1959. Industrial usage of LP-Gas in itself declined somewhat in 1960 due to the inroads of natural gas which has replaced LP-Gas in a number of industrial locations. Next year may see an upswing in industrial usage, however, as many industries are considering the use of stand-by LP-Gas plants in order to take advantage of the relatively low rates offered by the utilities on interruptible natural gas service. Industrial usage was stabilized somewhat by the noticeable increase in LP-Gas consumption by asphalt plants as the Federal highway program continued to move forward. LP-Gas that was consumed as refinery fuel is also included in this category in the miscellaneous group. It is estimated that the consumption of LP-Gas as refinery fuel in 1960 was about 120,000,000 gallons or about 12 per cent less than 1959. Although there was an increase in refinery throughput of 4 to 5 per cent, less LP-Gas was available for refinery fuel because LP-Gas recovery at refineries has been improved by about 10 per cent.

The use of LP-Gas in the secondary recovery of crude oil increased significantly in 1960 due to the maintenance of existing miscible phase recovery programs and the beginning of large new projects. This gives strong indication of

(Continued on page 51)

John Smith, Robert Fuller star on gas industry's new Tuesday night show

'Laramie' corrals Western fans

As a part of an agreement to renew the *Barbara Stanwyck Show* for the second six months of the 1960-61 season, Chairman Robert W. Ramsdell of the A. G. A. Television Committee has announced completion of arrangements for the gas industry to become a limited sponsor of a second national TV program, without any increase in cost.

With the renewal of the *Barbara Stanwyck Show,* the industry is assured continued sponsorship of its current TV series between now and September.

The new program is *Laramie,* the highly-rated western series appearing Tuesday evenings (7:30-8:30 P.M. EST) over NBC. Under the arrangements worked out with NBC, there will be a one-minute gas commercial appearing on the show every other week. A. G. A.'s sponsorship begins on Tuesday, January 17, 1961 and will continue for a total of 10 broadcasts through May 23—the peak viewing season.

With A. G. A. continuing its sponsorship of the *Barbara Stanwyck Show* on Monday nights, Mr. Ramsdell points out, sponsoring utilities not only will enjoy association with their own show, but will be adding tremendously to the circulation of gas sales messages among their customers and prospects. *Laramie* will add to the gas audience many millions of enthusiastic "Western" viewers never previously reached by the industry's national TV campaign.

In calling attention to the sales and merchandising opportunities presented by this double-barrelled TV campaign, Mr. Ramsdell has urged each utility sponsor to step up its audience promotion as a means of providing maximum tune-in both for *Barbara Stanwyck* and *Laramie.*

A. G. A. TV Schedule
First Quarter 1961

Barbara Stanwyck Show
(Mon. 10:00-10:30 P.M. EST-NBC)

January 2, 9, 16, 23, 30
February 6, 13, 20, 27
March 6, 13, 20, 27

Laramie
(Tues. 7:30-8:30 P.M. EST-NBC)

January 17, 31
February 14, 28
March 14, 28

Industrial relations round table

Prepared by
A. G. A. Personnel Committee

Edited by W. T. Simmons
Assistant Personnel Manager
Philadelphia Electric Co.

● **These steps will improve your memory**—In the February, 1960, issue of *Modern Office Procedures,* W. Schweisheimer stated that every time a man says he has a memory like a sieve, he makes a new hole in it. He reminds us we can improve our memory, if we are willing. The first step is to get plenty of rest; fatigue is the prime enemy of memory. Secondly, don't overburden the mind with fragments of unimportant information. Thirdly, try to remember things as a whole, not piecemeal. We can learn better by spreading out our learning time. We will remember a speech better if we read it twice a night for five nights than if we read it 10 times in one night. Do we learn better by listening or reading? It is worth remembering that we learn best when we are happy, so it pays to bring an optimistic attitude to the task of memorization. Finally, back up the memory with notes. They can actually help the memory, because writing something down helps you to remember it while it relieves the mind of the necessity to remember, freeing it to absorb other things.

● **Ford declines Reuther proposal for auto makers' labor-management group**—The proposal of Walter P. Reuther of the United Auto Workers that General Motors, Chrysler, and Ford Motor Company join UAW in establishing a labor-management conference for discussions away from the bargaining table has been declined by Ford and reportedly also by GM.

Ford has made public a letter to Mr. Reuther from K. D. Cassidy, vice president, industrial relations. The company says it does not believe that acting in concert with UAW as Mr. Reuther proposed or with Ford's competitors and UAW is "either sound or consistent with the position and the function each of us has in the American scheme of things."

Mr. Cassidy told Mr. Reuther that the company, like the union, stands as one organization among countless others in communities, schools, churches, businesses, trade organizations, hospital groups, trade unions, and professional societies. Each has a special contribution to make, and each has its responsibility to the community and to the public. Ford, he said, is fully aware of its community and citizenship responsibility, and he suggested that Ford and UAW continue to work toward their objectives, together with others who share them, through normal civic and community channels.

● **Your mind can kill or cure**—In the May, 1960, issue of *The Lion,* F. L. Remington stated that in recent years medical science has accepted the concept that we often induce illness by our own destructive thinking. These maladies are described as psychosomatic. A research team of the American Medical Association, probing the extent of psychosomatic disease, has found strong evidence that all illnesses are mind-induced to some degree. At the root of many such maladies lies an unwillingness to accept life except on our own terms. Thus, the janitor develops back trouble because he despises his job of taking out rubbish barrels. There is the elderly woman who develops arthritis when circumstances force her to live in an environment she hates and whose arthritic symptoms disappear when she returns to the city, which she loves. There is plentiful evidence that the mind governs well-being to the same extent that it influences illness. Experiments with candy pills or placebos illustrate this. When such pills were given to a group of English sailors during World War II, with the assurance that they were sure-fire cures for seasickness, the pills reduced the incidence of seasickness by more than one half. In today's tense world, it is more important than ever to develop a real will to be well. Whether our minds kill or cure is up to us.

● **Let us not do desperate things**—Norman Topping states in the August, 1960, issue of *The Toastmaster* that we live in an age of explosion—hydrogen, population, classroom, even the recently announced compact car explosion.

An explosion in communications is also taking place. Never before has so much been said to so many. But, what we most urgently need today is an explosion of thought and knowledge and a means of escaping from the din of communications to the solitude necessary for calm, deliberate contemplation.

We have come to a state where, as Albert Schweitzer puts it, "man has learned to control the forces of nature before he has learned to control himself." While we have learned to transmit the things we say rapidly and to great numbers of people over vast distances, it is not certain what we say merits our means of distribution.

Dr. Topping reminds us that thought in the affairs of men is crucial today. Every decision we make, every action we take is of greater consequence now than ever before. We must take time to think clearly and deeply. The human situation calls, as never before, for wisdom.

As Thoreau said, "it is a characteristic of wisdom not to do desperate things."

● **NLRB rulings**—Board okays firm's use of pay envelope as anti-union tactic—The Steelworkers Union has lost its argument before the National Labor Relations Board that an election lost in a unit of 714 employees at The Mosler Safe Company, Hamilton, Ohio, should be nullified because of a payroll gimmick used by the employer against the union.

A Leedom-Rodgers-Jenkins panel rejected the contention that election results should be set aside because on the day of the election, shortly before the polls opened, the employer distributed pay envelopes to employees in each of which was enclosed a smaller envelope containing a $5 bill. With the bill, which was part of the employee's pay, was this message:

> "This $5 is yours. *Now* the CIO wants us to take at least $5 out of your pay envelope each month and send it to them. To keep the CIO from getting $60 a year out of your money, vote against them in the election today. $60 minimum yearly dues is only a starter. There [are] also initiation fees —and possible assessments, 'political contributions,' fines, and other charges. What a difference there is between CIO big talk—and the true facts."

The election, in which the steelworkers got 191 votes, while the incumbent Safe Workers Organization, Chapter Two, got 501, was held on Friday, April 21, 1960, between one p.m. and five p.m. Ordinarily the employer distributed pay envelopes on Fridays between 3:30 p.m. and 4:30 p.m., but in this instance he distributed the envelopes shortly before noon.

NLRB rejection of the steelworkers' complaint that the employer's tactic interfered with employee freedom of choice was based on the board's decision in the case of Montrose Hanger Company. In that case the board held that election results should not be dismissed because of the employer's use of pay check deduction cards to get across an anti-union message to employees on the day of an election lost by the petitioning union. The message, as in the instant case, called attention to dues employees would have to pay if the union was established in the plant. The board rejected the union's complaint, stating that since the employer did not mislead employees on the amount of dues the union would collect if successful in the election, the mere form of the propaganda did not require invalidating the vote. The board drew a distinction between this and the case of Bata Shoe Company, in which the employer used similar tactics but did not stick to the facts.

In the present instance, in which the employer stuck to the facts, the panel concluded that neither use of the pay envelopes for anti-union propaganda nor acceleration of the pay hour constituted interference with employee freedom of choice that would require setting aside election results.

United Gas Corporation's 1960 Convention exhibit showed six new items

UGC's corrosion detection caliper attracted keen interest of gas men

Convention delegates also found other UGC developments fascinating

New research developments win praise

Gas companies conducting their own research and development programs were commended in December when the Executive Committee of the A. G. A. Board of Directors approved a resolution praising both gas company and manufacturer entries in the 1960 Convention's "Festival of Flame" exhibition.

The committee unanimously approved continuation of gas company and manufacturer research and new development exhibits at future Conventions. The next such exhibition is definitely scheduled for the 1962 Convention at Atlantic City.

The Committee's action followed a post-Convention questionnaire survey of the gas industry, in which nearly 100 per cent of respondents expressed enthusiasm for the gas company exhibits.

Gas companies represented by displays of research and technical developments at the Convention were Elizabethtown Consolidated Gas Co., Lone Star Gas Co., Northern Illinois Gas Co., Oklahoma Natural Gas Co., United Gas Corp., and Washington Gas Light Co.

In United Gas Corporation's exhibit alone, six technical developments considered "new and significant" by A. G. A. were shown. Following was Northern Illinois Gas Co., with four separate entries.

The Executive Committee approved the following resolution from Christy Payne, Jr., "Festival of Flame" chairman:

"WHEREAS the 'Festival of Flame' educational exhibit at the 1960 A. G. A. Convention has effectively demonstrated the results of gas industry research and development in appliances and equipment;

"WHEREAS this exhibit has been acclaimed by the gas industry and its allies as an effective stimulant of new developments in gas appliances and equipment;

"WHEREAS the 'Festival of Flame' has proved that the number of new developments in gas appliances and equipment has increased significantly during the two-year period following the first educational exhibit in 1958, and, numerous additional developments are expected within the next two years;

"THEREFORE be it resolved that the Executive Committee and the Board of Directors of the American Gas Association commend all companies participating in the 'Festival of Flame' for promoting confidence and enthusiasm in the gas business;

"FURTHER resolved that the next educational exhibit of significant new developments be scheduled to coincide with the 1962 Convention in Atlantic City;

"FURTHER resolved that member gas companies and manufacturers be encouraged to stimulate the greatest possible exchange of information, ideas and techniques through participation in the 1962 exhibit, wherever eligible, and through all other means practicable."

T. L. Robey, A. G. A.'s director of the PAR Research Program, commented on the complementary relationship between research activities by individual gas companies and industry-wide projects. Mr. Robey said:

"Gas company developments are an essential part of the gas industry research picture. They are especially important when they fall within areas of local gas company application which may not be covered in the over-all research programs.

"It was to recognize the importance of gas company research that the special exhibit area was assigned for company displays at the 1960 Convention.

"United Gas Corporation, long a leader in research, produced an outstanding exhibit which indicated both the depth and breadth of their investigations.

"We at A. G. A. feel that research work of this nature should continue to be strongly encouraged as greatly benefiting the entire gas industry, even though in some cases proprietary rights may be retained by the individual company."

Exhibits at Atlantic City in October represented a selective rather than a comprehensive array of gas company technical developments, since other projects than those shown also are being conducted by a number of companies.

Gas company entries selected for the "Festival of Flame" were the following:

ELIZABETHTOWN CONSOLIDATED GAS CO.

"Elf" leak detector and locator. Portable, battery-operated device for locating gas leaks in mains and services. By checking the sound waves the electronic device detects underground leaks and determines their location.

LONE STAR GAS CO.

Thermoelectric bathroom heater. Equipped with a 4800 Btu per hour Schwank burner and a series of 24 thermocouples to generate thermoelectric energy for driving a circulating fan and to power the electric controls.

NORTHERN ILLINOIS GAS CO.

1. Automatic Gas meter prover.
2. Remote meter reading by telephone. System permits daily reading of industrial meters by dialing a telephone extension tied into special equipment on each meter.
3. Thermoelectric generator. Uses gas as the fuel to supply current for cathodic protection and signal generation in remote stations.
4. Witt gas main stoppers.

OKLAHOMA NATURAL GAS CO.

Thermostatically controlled commercial gas burner unit for use with glass coffee makers.

UNITED GAS CORPORATION

1. Internal corrosion detectors for pipelines 6" to 30" or larger.
2. Optical scanner and computer for orifice meter charts.
3. Continuously averaging device for temperature, pressure, or other single record charts. Permits one operator to handle entire job faster and more accurately than with comptometers or adding machines.
4. Magnetic digital domestic meter reader. Portable, weatherproof device which eliminates many costly operations of hand-tabulating, recording and billing.
5. Punch card output for mechanical integrators.
6. Optical attachment for dew point instruments. Device has a self-contained light source, permitting dew points to be taken at night or under adverse weather or enclosure conditions.

WASHINGTON GAS LIGHT CO.

A display based on the theme that research is the lifeblood of industry's growth.

Entries by manufacturers exhibiting at the 1960 Convention were listed in the November 1960 issue of the MONTHLY.

Promote modern gas at modern living show

A joint promotion by three gas companies highlighted gas industry exhibits at the 1960 Modern Living Home and Flower Show held recently in Chicago, Ill. Theme of the exhibit sponsored by Northern Illinois Gas Company, North Shore Gas Company, Peoples Gas Company was "Go Modern—Go Gas"

Hawaii host for Pacific conference

J. C. Stopford, president Honolulu Gas Co., will greet visitors

A. G. A. Managing Director C. S. Stackpole will be main speaker

In the 50th State, a popular bit of "pidgin English" often greets visitors to Polynesian shores—"Lucky you come Hawaii!"

Gas industry guests from three continents will be echoing that sentiment when they meet in Honolulu on February 13 and 14 for the Mid-Pacific Merchandising Conference. Though this is the second such conference in Hawaii, it remains the first one in the newest state. The initial 1959 convention was held when Hawaii was still a territory.

Joint hosts for the conference are the Pacific Coast Gas Association, the Gas Appliance Society of Hawaii and Honolulu Gas Company, Limited.

The two-day meeting is attracting gas industry officials and appliance men from the mainland United States, Japan, Australia, the Philippines and Canada. Joining them at the Hawaiian Village Hotel will be dealers and distributors from all the major Hawaiian islands. Program plans further the international scope of the conference. Gas industry representatives from Japan, Australia and Alaska as well as from the mainland states have been asked to speak.

Governor William Quinn, Hawaii's first elected governor, has been asked to give the welcoming address. Keynote speaker will be C. S. Stackpole, manag-

(Continued on page 52)

Outdoors will be reminders of old Hawaii, indoors modern gas displays like this

Entire range of Section committees reports advance plans for year of A. G. A.-EEI work

Accountants organize for 1961

REINHOLD H. JOHNSON, *CHAIRMAN* · CONRAD F. MILLS, *VICE-CHAIRMAN*

Accounting Section projects for the year ahead were announced, and current activities reviewed, at the Section's organization meeting held in collaboration with Edison Electric Institute's Accounting Division in Pittsburgh, Pa., September 15 and 16.

Enthusiasm for the work of standing committees represented was evidenced by a record attendance of approximately 360.

For the first time in the history of these joint committee endeavors every standing committee was able to report effective advance planning in the form of special screening committee meetings. At these meetings, held during the summer months, key personnel from each committee conducted extensive discussions of each study topic which had been suggested by industry members. These discussions resulted in selections of projects for the year ahead which constitute the most objective and reflective efforts to study matters of the broadest possible importance and interest to the industry. By this advance planning, every committee was enabled at the Pittsburgh meeting to plunge more quickly into the assignment of personnel, selection of any project chairmen not previously designated, and the actual studies.

In his opening remarks, Reinhold H. Johnson, chairman of the A. G. A. Accounting Section, stressed the theme, "Performance and Profits," which has been selected as the keynote for the various studies and papers to be completed this year. This selection is based upon the conviction, detailed in a recent study and report publicized by the

R. H. Johnson, Brooklyn Union Gas Company, Accounting Section chairman

C. F. Mills, Philadelphia Electric Company, is 1961 vice chairman

American Telephone and Telegraph Company, that profitable companies are able to serve the nation better than poor companies. Profits are vital to growth, more and better capital equipment, more capital investment on more favorable terms, more and better products for the purchase price, more and better research and innovation and more jobs and better pay. Profits hinge upon performance in all areas of the utility business and therefore "Performance and Profits" merits the concentrated attention of its accounting representatives.

Mr. Johnson also introduced an innovation, for such a meeting, designed to help broaden the viewpoint of the Section membership and to emphasize that each committee member, while doing his normal committee work, actually is part of a significant Accounting Section program which functions through the entire year rather than being organized solely to produce a Spring Accounting Conference. In stressing the need for this awareness, he spoke briefly of recent Accounting Section activities which in the past probably would have been known only to the respective Committees. Highlighted without any attempt to indicate relative importance were:

(1) A study, by a special committee representing past chairmen of the Section, of the present organization and recommendations for improvement. Principal improvements are the provision in the Section structure for the committee assignment by member companies of employees engaged in data processing and work measurement activities. As a result of approval at the November 1960 meeting of the Managing Committee, the recommendations will be implemented at the earliest possible date.

(2) The Seminars and other important contributions of the Electronic Accounting Machine Developments Committee. A very successful 8th Annual Electronic Seminar was conducted in

Robert B. Herrold is coordinator of Customer Activities Group

Harry F. Luther is chairman of Customer Accounting Committee

William G. Kelsey is chairman of Customer Collections Group

Edwin J. Ferguson is chairman of Customer Relations Committee

Carl D. Osterholm, coordinator of General Activities Group

W. H. Caunt, Jr., Depreciation Accounting Committee chairman

John F. Kavanagh is chairman of General Accounting Committee

William T. Mott is chairman of Internal Auditing Committee

J. A. Cochran, chairman of Plant Accounting & Property Records

Leon M. Plasterer is chairman of Taxation Accounting Committee

Conrad F. Mills, coordinator of Special Activities Group

Stuart A. Cole is chairman, Methods and Procedures Committee

Emanuel Toder, chairman, Application of Accounting Principles

J. P. Bromley, chairman Electronic Accounting Machine Developments

F. J. Labanca, chairman of the Uniform System of Accounts Committee

Atlantic City, New Jersey on November 28-30, 1960.

(3) Three industry meetings since October 1959, in Chicago, Denver and Cleveland, concerned with actual experiences with work measurement activities.

(4) The securing from a cross-section of the industry, and transmittal to the Advisory Council on Federal Reports, of opinions on whether it would be desirable for that Council to seek standardization of reports required by State Commissions and the Federal Power Commission. Because the responses were not conclusively in one direction, no industry-wide position could be taken.

(5) Accelerated action, following the appointment of a Special Committee, on commitments for the time and place of the 1962 (Philadelphia) and 1963 (Denver) Spring Accounting Conferences. This recognizes the increasing difficulty of securing prime locations and dates.

(6) The alerting of the industry, by the Uniform System of Accounts Committee, as to the new Federal Power Commission classifications of accounts. The Washington Gas Light Company and Rochester Gas and Electric Corporation prepared useful comparisons of the new and old systems which received wide distribution. The Committee also has coordinated relationships with the NARUC and FPC, through several meetings, on special industry studies concerned with:

(a) proposed revisions of records retention periods, the work on which has been done primarily by present or past members of the General Accounting Committee. These recommendations, awaiting only the formality of approvals by the NARUC and FPC, are expected to provide considerable relief spacewise and administratively for the many companies affected.

(b) revisions of lists of property retirement units, such revisions resulting from the efforts of the Plant Accounting and Property Records Committees. The target date for conclusion is early 1961.

(7) Continual advice to the industry, by the Taxation Accounting Committee, on proposed and introduced tax legislation and regulations. Special attention and follow-up also is being given to the recent U. S. Treasury Department questionnaire on depreciation practices.

(8) The Committee on Application of Accounting Principles establishment of a relationship whereby it is given an early opportunity for comments on proposed studies and bulletins to be issued by the American Institute of Certified Public Accountants. The Committee has substantially completed a proposed statement to the AICPA setting forth the in-

(Continued on page 49)

GORDON C. GRISWOLD, *CHAIRMAN* · WILLIAM B. TIPPY, *VICE-CHAIRMAN*

Charleston Setting For Spring Conferenc

General Management Section's annual meeting coincides with centennial observance for battle of Fort Sumter, South Carolina

GORDON C. GRISWOLD
Chairman

One hundred years after the bombardment of Fort Sumter, Charleston, South Carolina, scene of the opening engagement of the War Between the States, will also be the scene of the seventh annual General Management Section Conference.

The date, March 20-22, 1961, comes at the middle of the Centennial celebration and at a time when Charleston's famed old homes are open and its gardens are in full flower.

The opportunity to visit historic Charleston is expected to attract a record number of delegates' wives to the Conference. For their benefit, an extensive Ladies' Program has been arranged. Highlights will include a tour of Charleston homes that date back before the Revolutionary War, and a visit to the renowned Middleton Gardens and Cy-

WILLIAM B. TIPPY
Vice chairman

L. T. Potter

F. W. Batten

R. W. Fleming

J. J. Corson

E. C. McGraw

C. A. Ulffers

J. Lewis Powell

Leonard Spacek

R. N. Papich

CONFERENCE SPEAKERS

press Gardens. On the final afternoon, Wednesday, March 22, a boat trip around Charleston harbor and to Fort Sumter has been arranged for all delegates and their wives.

The business meetings of the Conference again have been divided into morning General Sessions, general luncheons, and afternoon meetings sponsored by Section committees. An imposing array of speakers has been invited to address the Conference by the Arrangements Committee, headed by William B. Tippy, president, Commonwealth Services, Inc. and Section vice chairman.

Among leading gas industry spokesmen scheduled to appear are L. T. Potter, president of A. G. A. and president of the Lone Star Gas Co., who will address the luncheon meeting on Monday, March 20; E. Clyde McGraw, president, Transcontinental Gas Pipe Line Corp., who will comment on a national fuels policy; and Fred W. Batten, vice president, Columbia Gas System, who will report on the status of research in the gas industry. A. G. A. Safety Manager R. N. Papich will discuss management's role in accident prevention.

The list of General Session speakers includes Leonard Spacek, managing partner, Arthur Andersen & Co.; John J. Corson, director, McKinsey & Co.; Professor Robben W. Fleming, College of Law, University of Illinois; and C. A. Ulffers, Jr., assistant vice president, American Telephone & Telegraph.

J. Lewis Powell, nationally known for his various presentations on the "Collapse of Time" theme, will be the speaker at the general luncheon on Tuesday, March 21. His talk will deal with "The Challenge of Change" and will illustrate how a stampeding technology is drastically changing the political, economic, business and social dimensions of the world. He will relate the changes to the job of the modern executive and will emphasize that in this world of change executives can no longer afford to be mentally geared to the past.

Mr. Spacek, whose position on management financial reports is, according to a recent article in *Fortune* Magazine, often a source of controversy among his fellow CPA's, will discuss some present practices that will affect future economics of utilities. Mr. Spacek feels that although utilities have done an outstanding job in keeping up with the demands of the public, there is an inclination to judge financial success by stock market increases in value of stock and to adopt practices that benefit the present financial reporting data and keep rates at a lower level than they should be economically. This shifts the burden of cost to the future, exactly as the railroads have done for the last fifty years. Mr. Spacek will speak at the General Session on Wednesday, March 22.

The role of government in business and its effect on the economic outlook will be the topic of Mr. Corson. His point of view is that no sound forecast of business conditions can fail to take into account the increasing importance of government expenditures. Educator, author, and consultant to industry and government, Mr. Corson is well quali-

(Continued on next page)

fied to interpret the economic significance of policies of the new administration.

Professor Fleming will discuss some of the economic problems which are created for employees displaced by technological change. He will draw upon his current experience as Executive Director of the Armour Automation Committee and on his background as an arbitrator and director of industrial relations centers at the University of Wisconsin and the University of Illinois.

The need for profit in a regulated industry will be the theme of the talk to be given by Mr. Ulffers. His remarks will be based on an interpretation of a study of regulated and non-regulated businesses conducted by American Telephone & Telegraph. Mr. Ulffers will examine the role of profit in our economy, which has often been applauded in the theory and attacked in the specific, both from the point of view of our economy as a whole and in regulated industry.

The coal industry's campaign for a national fuels policy which would restrict the present free competition among the various forms of energy will be discussed by Mr. McGraw under the title "Our National Energy Dilemma." He will review the present and future energy requirements of our economy, and point out the economic effects of restrictive legislation in favor of one fuel against another. As the president of one of our industry's largest transmission companies, Mr. McGraw is qualified to give the hard facts of this subject and to demonstrate how a gas consumer would be the immediate loser should such a fuels policy be enacted.

An authoritative account of research now being conducted by the gas industry and the A. G. A. will be given by Mr. Batten, who is Chairman of the A. G. A. General Research Planning Committee. The potential of some of the startling new developments in gas utilization, particularly through devices to convert heat directly to electricity, will be evaluated from the point of view of both the immediate and the long-range future. Mr. Batten will also discuss research projects aimed at improving the day-to-day operations of the gas industry.

"The Safe Sixties" will be the title of Mr. Papich's talk, which will deal with the specifics of accident prevention but will be directly related to the responsibilities of management. Mr. Papich, whose forceful presentations before the A. G. A. course, "Accident Prevention

(Continued on page 46)

Self-insurance for gas companies discussed in report

Gas companies interested in becoming self-insured, or in reviewing their present practices in the area of claims and insurance, will be interested in a paper, "Self-Insurance, Its Nature and Use."

R. W. White

Sponsored by the American Gas Association Claims Committee and written by Raymond W. White, manager, Claims and Safety Department, Pacific Gas & Electric Co., the report encompasses the following questions:

What is self-insurance?

When is it desirable to self-insure and how is this determined?

How is the organization developed and operated to properly handle self-insurance?

Mr. White begins with an explanation of the various kinds of insurance and describes the types of organizations used. Among them are mutuals, reciprocals, stock companies, Lloyds Associations, profit-sharing companies, and service companies. He then proceeds to define self-insurance and to discuss its concept and development.

Another chapter is devoted to factors that a company should consider in determining whether or not to self-insure and a discussion of the possible advantages of self-insurance.

The major section of the paper is entitled "How is the organization developed and operated to properly handle self-insurance?"

Here Mr. White goes into considerable detail on what he sees as the "ideal" organization. For the purposes of illustration, Mr. White has discussed the organization of a department in terms of a large company but makes clear throughout that the basic functions can be carried out on a smaller scale.

"Self-Insurance, Its Nature and Use" is the result of a review of self-insurance practices initiated by the A. G. A. Claims Committee and assigned to a subcommittee composed of Mr. White, Roy A. Gormsen, claims agent, Southern California Gas Co., and Howard A. Watt, general claim agent, Public Service Electric & Gas Co. Because Mr. White had lectured on this subject, he was asked to write the basic report, which was then circulated to members of the Claims Committee for their suggestions. The final draft was completed by Mr. White, who is well qualified to comment on this subject.

Mr. White joined the Pacific Gas & Electric Co. in 1933, working there while completing his college and legal education. He is an attorney and has been manager of the Pacific Gas & Electric Co.'s Claims and Safety Department since 1946. In addition to membership on the A. G. A. Claims Committee, Mr. White is president of the California Self-Insurers Association and was recently elected president of the National Council of Self-Insurers.

In the concluding section of the paper, Mr. White comments, "The scarcity of written material on the subject of self-insurance led the author to set forth certain fundamentals and then a broad review of the subject. Considerable attention was given to the organization and the procedures which might best be developed for the performance of the claims and loss or accident prevention functions of a self-insurer.

"The discussion has been kept on a standard of generality so as to be of assistance to as many as possible; therefore, no effort was made to distinguish or review applicable laws of the various jurisdictions where self-insurers may operate."

Copies of this paper have been distributed to delegates of A. G. A. member companies. A limited number of copies is available for general distribution at a charge of $1.00 each. Orders may be addressed to the Order & Billing Dept., American Gas Association, 420 Lexington Ave., New York 17, N. Y.

Students from several nations cover technical aspects of large-capacity installations

Salesmen schooled in cooling art

Perfect attendance by 170 enrollees resulted in packed classroom for Gas Air Conditioning Sales School

A mark earned by all who attended the 1960 Gas Air Conditioning Sales School was "E" for enthusiasm—enthusiasm—enthusiasm of the nearly 170 enrolled students, the more than 20 lecturers, the Air Conditioning and Heating Committee, and the operators of the Nationwide Inn, Columbus, Ohio, where the school was held during the week of December 5, 1960.

Coming from thirty-one states, the District of Columbia, Canada, Australia and West Germany, the registered students applied themselves diligently during the five days of the school. Their enthusiasm was exemplified by perfect attendance at each of the four days' lectures and the one day set aside for plant visitation.

On the four days of sessions, there were two lectures each morning and two in the afternoon, each lecture was scheduled for one and one-half hours. This provided ample time for both the presentation and a question period.

All phases of air conditioning were covered in this most comprehensive school. Opened with welcoming remarks by Charles C. Eeles, director of business promotion, Columbia Gas System Service Corp., the first session started with an outstanding lecture on the definition of air conditioning and the requirements of an air conditioning system by Alfred L. Jaros, Jr., a consultant, who thus laid the groundwork for subsequent lectures.

Then followed technical descriptions of the various air conditioning systems: reciprocating and centrifugal compression, by Philip F. Little, Carrier Corporation; gas engine drive, by Norbert K. Hall, The Ready-Power Company; steam turbine drive, by John J. Boyle, Worthington Corporation; gas turbine drive, by C. R. Apitz, Clark Brothers Company; and absorption, by Paul E. Chamberlin, The Gas Service Company.

At one of these sessions a panel representing several equipment manufacturers sat to answer specific questions. Panelists were: Allen Davis, Arkla Air Conditioning Corporation; W. R. Barnard, The Trane Company; Keith T. Davis, Bryant Manufacturing Company; G. Owen Kuhen, Carrier Corporation; and Fred C. Wood, York Corporation.

The difference in steam pressures required for turbines and absorption machines, together with different types of boilers, their auxiliaries and other equipment, was discussed by William F. Zunker, Cleaver Brooks Company. He was followed by Victor C. Nelson, Carrier Corporation, who presented a detailed lecture on cooling towers, evaporative condensers and air cooled condensers.

On the last two days of the school, the technical aspects of air conditioning were completed with lectures on small tonnage units by A. B. Banowsky, United Gas Corporation; and humidity control by direct absorption and adsorption, presented by Robert E. Roberts,

Manufacturers' panel. From left, P. E. Chamberlin, Gas Service Co.; Allen Davis, Arkla; W. R. Barnard, Trane; K. T. Davis, Bryant; F. C. Wood, York; G. O. Kuhn, Carrier

From other lands: R. W. Freypons, left, Glen Caughey, Frank Edgell, R. E. Potts, W. Cork, Canada; R. E. O'Leary, Australia; Till Dehmel, Germany; J. Neville, Canada

Bryant Manufacturing Company.

The remaining six lectures were devoted to sales phases of air conditioning with papers on cooling load estimation, by W. F. Driscoll, Carrier Corporation; comparative cost analysis, by M. E. Orelup, Oklahoma Natural Gas Company; market opportunities, by W. J. Ortman, Minneapolis-Honeywell Regulator Company; electric competition, by John Cousley, Philadelphia Electric Company; service recommendations, by Frank J. Sylvia, The Ohio Fuel Gas Company; and a fine inspirational talk on sales and promotional activities of The Ohio Fuel Gas Company by Marvin E. White as a fitting conclusion to the school sessions.

On the middle day of the school, plant visitations occupied the entire time. The student body was divided into four groups, each with its own bus. All groups met at the Western Electric Company plant for lunch. There students saw a large industrial air conditioning installation which consisted of three 600-ton steam turbine driven Worthington centrifugal compressors. Steam is supplied by gas-fired boilers.

Other installations visited were:

A downtown warehouse and office building of The Ohio Fuel Gas Company, completely air conditioned by two Carrier 150-ton compressors driven by LeRoi gas engines.

One of the newest motels in Columbus, Arlington Arms, with 100 guest rooms and several public rooms air conditioned with three Arkla 25-ton chillers installed in the basement. A feature of this installation is that each chiller has its own cooling tower installed at ground level at the edge of a parking area.

An ultra-modern six-story office building air conditioned and heated by a Carrier 186-ton absorption unit and three 56 hp Titusville gas-fired boilers installed on the roof. Air distribution of this Beacon Mutual Insurance building is by a central high pressure double duct system.

Ohio's largest motel, Nationwide Inn, where this school was held, with its 275 guest rooms, public rooms, restaurant and large ballroom, is air conditioned and heated by a 200-ton York absorption refrigeration machine. Gas also serves the modern kitchen, furnishes hot water for the laundry, and supplies warm water to the swimming pool.

One other manufacturing plant was visited, Surface Combustion Corporation. It is completely air conditioned by a 75-ton Ready-Power gas engine and compressor.

Plants were selected and arrangements for the group visit were made by the industrial and commercial sales departments of The Ohio Fuel Gas Company.

One of the most significant aspects of the sessions was the question and answer periods after each lecture, during which it was evident that the students already had considerable knowledge of air conditioning problems. Questions were provocative and proved that students were anxious to broaden their grasp of all phases of gas air conditioning.

Another important activity of the school was the round-table discussions held at the close of afternoon sessions. The ballroom was divided into five separate rooms by movable partitions. Those students sitting in each area became the group of that area and a leader was appointed for each group to lead the discussion. Each student was furnished with a complete binder of all the lectures and manufacturers' literature, this material furnished the basis for these discussion groups.

A complete set of school lectures will be available for purchase in the near future. Details and price will be announced through the Section Newsletter.

Gas display layout in A. G. A. area offered visitors easy over-all view of the exhibits or convenient closer look at various booths

One of the committees holding organizational meetings during Hotel Show week was the Food Service Committee, above, T. Z. Dunn, chairman

At Commercial Gas Breakfast: Dr. J. W. Thompson, left, speaker; L. J. Fretwell, chairman; I. S. Anoff; and C. S. Stackpole

50,000 see Hotel Show exhibits

With registration for the first three days of the 45th National Hotel Exposition setting records, some 50,000 visitors thronged New York City's Coliseum during the week of November 14, to see the latest in equipment and developments in this field.

Occupying nearly 4,000 square feet, the A. G. A. Combined Commercial Gas Exhibit was a center of attraction. Facing two main aisles and with a large lounge area visible from all points, the exhibit was perhaps the most impressive ever sponsored by the Industrial and Commercial Gas Section.

Long vistas revealing all booths of the exhibit made it easy to go from one exhibitor to another without losing sight of any appliances. This convenient arrangement was taken advantage of by the many thousands interested in gas cooking equipment and allied appliances.

Those exhibiting under the Blue Flame Banner were:

Cecilware-Commodore Corp., New York, New York

Char-Rock Manufacturing Co., Inc., Indianapolis, Indiana

Cleveland Range Company, Cleveland, Ohio

Duke Manufacturing Co., St. Louis, Missouri

Gas Consumers Service, New York, New York

Martin Oven Co., Inc., Rochester, New York

Middleby-Marshall Oven Co., Chicago, Illinois

Robertshaw-Fulton Controls Co., Youngwood, Pennsylvania

A. O. Smith Corp., Kankakee, Illinois

South Bend Range Corp., South Bend, Indiana

Southern Equipment Co., St. Louis, Missouri

Suburban Appliance Co., Morristown, New Jersey

Among the newer items displayed in the A. G. A. area were adaptions of Schwank infra-red burners to broiling and roasting by South Bend in its new broiler and by Suburban Appliance in its rotisserie. It was also noted that Cleveland Range Co. had a combination steamer and power operated tilting kettle.

One of the highlights during Hotel Show Week was the 13th Annual Commercial Gas Breakfast held at the Hotel St. Moritz on Wednesday morning. Over 100 commercial gas men, equip-

ment manufacturers and representatives of the volume feeding trade press attended this affair. During the proceedings an innovation was made in the first presentation of a certificate of merit. This year it was awarded to I. S. Anoff. The citation read as follows:

"In recognition for his outstanding contributions and cooperation as Chairman of the Executive Committee of The Food Service Equipment Industry, Inc., in establishing a closer relationship between food service equipment dealers and the gas utility companies."

Speaker of the day was Dr. Joseph W. Thompson, director of the School of Hotel, Restaurant and Institutional Management, Michigan State University. Among the subjects he touched on was merchandising of the idea of families eating out periodically. Here he stated was an excellent opportunity to increase hotel and restaurant business.

During Hotel Show Week, meetings were held each day by those A. G. A. committees having to do with volume feeding segments of the gas industry.

General management

(Continued from page 22)

Through Informed Supervision," have become known from coast to coast, will be appearing before a major A. G. A. Conference for the first time.

The afternoon sessions afford an opportunity for many of the Section committees to hold meetings which attract delegates interested in their particular fields. Among groups holding open meetings are the Accident Prevention, Claims, Insurance, Personnel, and Gas Industry Statistics Committees.

The Purchasing and Stores Committee will hold its own workshop which attracts gas industry purchasing and stores people from all over the nation. A highlight will be a discussion of electronic data processing equipment as utilized for the purchasing and stores function. Robert L. Getting, accounting and finance supervisor, Milwaukee Gas Light Co., will discuss the experiences of his company in adapting this equipment to purchasing and stores work. Also participating in the discussion will be James R. DePauw, partner, Arthur Andersen & Co., who will outline the advantages and disadvantages in the use of EDP equipment in this area and will review critically the available equipment.

The Purchasing and Stores Committee will also sponsor an open round-table discussion of questions of specific interest to the gas industry purchasing and stores community. The two round-tables will be led by George A. Leonard, purchasing agent, The Consumers' Gas Co., and Lewis M. Smith, purchasing agent, American Louisiana Pipe Line Co.

Among other committees planning to sponsor speakers at the afternoon sessions are the Committee on Comparison of Competitive Services and the Personnel Committee.

The Conference will conclude with a general luncheon on Wednesday, March 22, immediately preceding the boat trip around Charleston Harbor and to Fort Sumter. Samuel Stoney, a local historian, will give some of the historical background of the city and the harbor. Ladies are cordially invited to attend this luncheon and the boat trip.

A hospitality room for delegates arriving in Charleston on Sunday, March 19, will be open from 6:00 P.M. at the Francis Marion Hotel. On Monday evening, the South Carolina Electric & Gas Co. will be the host at a cocktail reception for the delegates and their ladies. The reception will be followed by a Conference dinner where entertainment and a dance band will be provided.

Mr. Tippy, Chairman of the Arrangements Committee, has expressed his thanks for the exceptional efforts of Eugene Leier, vice president, South Carolina Electric & Gas Co., in arranging the entertainment and the Ladies' Program. Other members of the Arrangements Committee who participated in drafting the program and obtaining speakers are Donald S. Bittinger, president, Washington Gas Light Co.; Leslie A. Brandt, vice president and comptroller, The Peoples Gas Light & Coke Co.; Robert S. Bruns, Jr., vice president, Transcontinental Gas Pipe Line Corp.; Marvin Chandler, president, Northern Illinois Gas Company; Otto W. Manz, Jr., executive vice president, Consolidated Edison Co. of New York, Inc.; and John F. Pidcock, president, South Atlantic Gas Co.

Gordon C. Griswold, chairman, General Management Section, will preside at the meetings.

Reservations may be secured by addressing the Reservations Manager, Francis Marion Hotel, Charleston, S. C. The A. G. A. General Management Section Conference should be mentioned. It is urged that reservations be made well in advance as these particular dates are very popular for visitors to Charleston. Those driving who may wish to secure motel accommodations should instruct the Francis Marion management to secure reservations for them at one of two nearby motels.

Suggestions concerning transportation by air or rail to Charleston can be obtained from the hotel or by addressing Vaughan O'Brien, secretary, General Management Section, American Gas Association, 420 Lexington Ave., New York 17, N. Y.

Gas Industry Joins ASHRAE Show

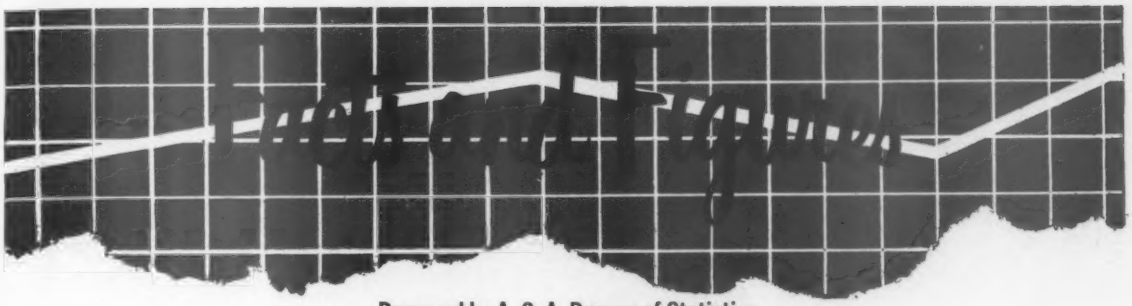
Large-tonnage gas air conditioners by four manufacturers will be shown in a combined A. G. A. exhibit during the 15th International Heating and Air-Conditioning Exposition to be held February 13-16 at International Amphitheatre, Chicago, under auspices of the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

The four manufacturers are Arkla Air Conditioning Corporation, Caterpillar Tractor Company, A. O. Smith Corporation, and Ready Power Corporation.

Equipment shown will incorporate many of the latest developments in industrial and commercial gas air conditioning.

The gas exhibit, which will occupy an area of more than 1200 square feet in the Amphitheatre, will be seen by an expected crowd of 45,000 persons active in the field.

This year's national ASHRAE show will be the first in which the gas industry, as such, has participated.



Prepared by A. G. A. Bureau of Statistics

Total operating revenues of the investor-owned gas utility and pipeline industry attained a record level for the 12 months ended September 30, 1960. Revenues for the period totalled $8,562 million, a 14.9 per cent increase over the comparable year 1959. Depreciation, retirements, depletion, and amortization charges of $562 million were $43 million or 8.3 per cent higher than last year's total. Total tax accruals were charged at the rate of $1,083 million annually, up $190 million from last year for an increase of 21.3 per cent. Federal and deferred federal income taxes rose 24.9 per cent above last year's level of $514 million and accounted for 59.3 per cent of the total tax liability. All other taxes increased by $62 million to $441 million, up 16.4 per cent above the previous year. The combined operating revenue deductions amounted to $7,446 million for an increase of 14.7 per cent over the comparable period in 1959. The resulting net operating revenues were $1,116 million, a gain of $155 million over the $961 million reported a year ago.

Sales of gas to ultimate consumers during the month of October, 1960, were 6.0 billion therms or 1.7 per cent greater than sales in October, 1959. Consumption of gas by industrial users, accounting for nearly two thirds of all sales during the month, amounted to 3.9 billion therms. This is equivalent to a 1.5 per cent increase compared to a 4.5 per cent rise in all industrial activity as measured by the Federal Reserve Board. Due to the steel strike of 1959, general business activity was more depressed than that of industrial gas sales in October, 1959, with this factor partially accounting for the larger per cent gain in general business activity this year.

Sales of gas for the 12-month period ended October 31, 1960, aggregated

(Continued on next page)

GAS INDUSTRY INCOME STATEMENT

(MILLIONS OF DOLLARS)

REFERS TO ALL INVESTOR-OWNED DISTRIBUTING UTILITES AND PIPELINE COMPANIES

	Twelve Months Ended		Per Cent Change
	September 1960	September 1959	September 1960-1959
Total operating revenues	$8,562	$7,454	+14.9
Operating expenses—operating	5,533	4,828	+14.6
Operating expenses—maintenance	268	253	+ 5.9
Operating expenses—total	5,801	5,081	+14.2
Depreciation, retirements, depletion, amortization, etc.	562	519	+ 8.3
Federal income taxes	642	514	+24.9
All other taxes	441	379	+16.4
Total taxes	1,083	893	+21.3
Total operating revenue deductions	7,446	6,493	+14.7
Net operating revenues	1,116	961	+16.1
Other income	129	81	+59.3
Gross income	1,245	1,042	+19.5
Interest on long-term debt	382	334	+14.4
Other income deductions	4	(5)	—
Total income deductions	386	329	+17.3
Net income	859	713	+20.5

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES DURING OCTOBER, 1960

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	October		September		First Nine Months of 1960	
	Units	Per Cent Change	Units	Per Cent Change	Units	Per Cent Change
RANGES (including built-ins)						
Gas	169,800	—12.7	176,800	—15.9	1,552,300	— 8.4
Electric	127,900	—10.8	142,800	— 9.2	1,151,200	— 8.0
WATER HEATERS						
Gas	192,900	—29.6	226,600	— 7.1	2,308,300	— 9.9
Electric	49,200	—24.4	66,400	—12.1	517,800	—19.5
GAS HEATING—total	135,478	—21.4	144,034	—16.8	871,798	—12.0
Furnaces	96,400	—24.2	103,600	—17.5	670,600	—13.3
Boilers	19,178	— 3.8	18,734	— 5.3	104,998	— 2.9
Conversion Burners	19,900	—21.3	21,700	—21.7	96,200	—12.0
OIL-FIRED BURNER INSTALLATIONS	62,378	—28.4	47,473	—29.0	392,853	—10.4
DRYERS						
Gas	57,522	—16.4	59,378	— 0.1	287,424	— 7.6
Electric	94,399	—14.8	106,130	— 7.8	538,380	—11.6

Sources: Gas Appliance Manufacturers Association, National Electrical Manufacturers Association, "Fueloil and Oil Heat," and American Home Laundry Manufacturer's Association.

Facts and figures

(Continued from previous page)

92.2 billion therms or 6.6 per cent more than the comparable period last year. Industrial sales during the 12 months were 46.8 billion therms, a 3.9 per cent increase over the previous year.

Construction expenditures by the gas utility and pipeline industry for October showed no change from the $171 million spent in the same month one year earlier. Estimated industry construction expenditures for the 1960 calendar year are $1,890 million or 9.4 per cent more than in 1959. For the first 10 months of 1960 new private construction expenditures were about 2 per cent below the level for 1959.

New housing activity and sales of major appliances during the month were below those of 1959, as they have been for most of 1960. New non-farm homes started in October totalled 106,600, down 12.0 per cent from October, 1959. The first 10 months of this year showed a 19.1 per cent decline in starts on a seasonally adjusted basis. Sales of all major gas appliances in October, 1960, decreased by at least 12 per cent, while competitive appliances experienced similar losses of business during the month.

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES DURING OCTOBER, 1960

(MILLIONS OF THERMS)

	Month of October			Twelve Months Ended October 31		
	1960	1959	Per Cent Change	1960	1959	Per Cent Change
Natural gas	5,885.8	5,789.1	+1.7	89,883.5	84,136.0	+6.8
Manufactured and mixed gas	116.6	116.3	+0.3	2,310.9	2,360.5	−2.1
Total gas	6,002.4	5,905.4	+1.7	92,194.4	86,496.5	+6.6
Residential, commercial, and other	2,060.6	2,023.1	+1.9	45,380.9	41,430.6	+9.5
Industrial	3,941.8	3,882.3	+1.5	46,813.5	45,065.9	+3.9
Indices (1947-1949 = 100)						
Total gas sales (A. G. A.)	252.4	248.3	+1.7			
Residential, commercial, and other (A. G. A.)	260.2	255.4	+1.9			
Industrial (A. G. A.)	248.5	244.8	+1.5			

PERTINENT BUSINESS INDICATORS, OCTOBER, 1960

(WITH PER CENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR)

	October			September		
	1960	1959	Per Cent Change	1960	1959	Per Cent Change
Industrial activity, FRB (1947-49 = 100)	162	155	+ 4.5	162	157	+ 3.2
Consumer prices (1947-49 = 100)	127.3	125.5	+ 1.4	126.8	125.2	+ 1.3
Housing starts, non-farm (thousands)	106.6	121.2	−12.0	100.3	136.1	−26.3
New private construction expenditures ($ million)	3,486	3,630	− 4.0	3,543	3,725	− 4.9

Meet your Association staff

Robert C. Kluthe

A newcomer to A. G. A. but not to the petroleum industry, Bob Kluthe joined the research department of the Association in June, 1959, as assistant to Robert Smith in air conditioning research. A half-year later he was assigned the entire responsibility of the air conditioning research section of the department.

Mr. Kluthe is a graduate of Rensselaer Polytechnic Institute, with the degree of bachelor of science in chemical engineering. He began his career as a process engineer with California-Texas Oil Company, Ltd., a firm with foreign operations. It was the prospect of sojourns of three years in Arabia or four years in Australia that caused him to switch his allegiance from oil to gas. He had already "seen the world" as a gunnery officer in the U.S. Navy.

During his military service (1954-1956), he was stationed in Brooklyn, N. Y., aboard the *U.S.S. Snyder*, a destroyer escort. However, his duties included training reservists in gunnery and seamanship and took him to 10 different Caribbean ports and more than once to Europe. He left the service as a lieutenant.

Originally from Midland Park in northern New Jersey, he is now a thoroughgoing Manhattanite, with an apartment in midtown and a sailboat with which to escape metropolitan clatter.

He shares the boat with his roommate. They keep it on the south shore of Long Island, N. Y., and make use of it in season for jaunts to Jones Beach or Fire Island. During last year's Hurricane Donna, the boat trailed two cement blocks (small ones, he says) through Northport Harbor before coming to ignominious rest on a pile of rocks. However, she survived the damage from the storm and currently is in storage in a back yard, while Mr. Kluthe pursues his winter diversion, skiing.

Among his other interests is lacrosse, which he played at college. He was co-captain of the team and won honorable mention as All-American. He finds time, too, for tennis, bowling, and photography.

Accounting

(Continued from page 19)

dustry's position with respect to accounting matters having special significance for regulated public utilities.

(9) Two annual studies of the General Accounting Committee which are given practical use:

(a) the comparison of the year-to-year financial statements of a large cross-section of the industry with accent on trends toward changes in principles observed and format.

(b) the summarization of important regulatory releases, court decisions and other major accounting developments which concern the industry.

(10) An intensive investigation by the Customer Accounting Committee of developments in automatic meter reading. The Committee also has developed such useful information as a comparison of bill forms and a directory of customer accounting methods and equipment.

(11) Considerable work by the Depreciation Accounting Committee and others in the many facets of the liberalized depreciation provisions of the Federal income tax law.

(12) A considerable number of case studies and audit manuals prepared and disseminated by the Internal Auditing Committee. The Committee also has taken the leadership in distributing information on applications of statistical sampling.

Substantially all of the two-day meeting was devoted to the technical work of the respective committees. With the exception of the matters discussed above, the principal research and study for the 1960-1961 year is concerned with the subjects listed below.

Customer Activities Group

The Customer Accounting Committee is devoting its efforts to the receipt and distribution of mail cash payments; functions of the Customer Accounting Department before and after conversion to a mechanical system; newest applications of electronics for customer accounting; new developments in machine accounting; frequency of reading and billing; intracompany data transportation; practices in estimating billing and in high-low review; cost comparisons; and postal regulations concerning customers' bills.

The Customer Collections Committee is studying the experiences of member companies with bi-monthly billing and budget payment plans; the collection practices in the industry; and whether the cost of collectors is justified. It also will prepare a statistical analysis of the collection experiences of approximately 80 utility companies, the results to be reported in the A. G. A. MONTHLY.

The Customer Relations Committee is concentrating on high bill inquiries; why customers appeal to higher authority; automation versus humanics, the effect of automation on customers; new developments in customer relations policies; the value of communications media in customer relations; company practices regarding meters not read; the need for district offices; and updating of material for training customer relations personnel.

General Activities Group

The Depreciation Accounting Committee is conducting research and will prepare reports on the economic effects of varying the rate of capital recovery; unit summation accruals; price level depreciation; obsolescence; court and regulatory commission decisions; depreciation allowances for involuntary removals of property; net salvage; depreciation computations including electronic applications; mortality studies of boilers and generators; depreciation of land and land rights; and a bibliography of recently published articles on depreciation.

The General Accounting Committee is developing its studies and will report on case studies of responsibility accounting and reports; general accounting applications on electronic accounting machines; training and development of utility accountants; leasing vs. ownership; manpower budgeting; account distribution of accrued payroll liability for payrolls not on a calendar month basis; a directory of general accounting methods, procedures and equipment; budget manuals; techniques accountants can employ to improve performance and increase profits; and productivity measurement.

The Internal Auditing Committee emphasis is on audit manuals for Personnel Department records and procedures, taxes, budgets and cost controls, building operations and maintenance and appliance sales operations; review of the Committee's activities from 1950 to 1960; annual master audit control schedules; measuring and comparing internal auditing activities; the effect of electronic data processing installations on internal auditing; and a review and updating of present internal auditing procedures.

The Plant Accounting and Property Records Committee has project teams working on the application of electronic data processing equipment to accounting for mass properties; control of construction and reporting under blanket work orders; work measurement standards for construction; accounting and billing experience with highway relocations; plant accounting forum; recent machine accounting applications for property; work measurement for property accounting personnel; property accounting case studies; recruiting, selecting and training of plant accounting employees; size and simplification of property units; compendium of reports and glossary of terms for property accounting; and a report of major changes in the revised FPC Uniform System of Plant Accounts effective January 1, 1961.

The Taxation Accounting Committee has established subcommittees on manufacturers excise tax and court cases. It also prepares papers on technical tax subjects as a basis for discussion at its committee meetings.

Special Activities Group

The Electronic Accounting Machine Developments Committee has subcommittees studying data transmission and information feedback to a computer center; and random access equipment and its potential in the utility field. Close liaison with manufacturers is provided through the assignment of individual members to secure and distribute information concerning hardware and other developments by their assigned manufacturers. The Committee also produces and disseminates the valuable technical periodical *Tubes and Tapes.*

The Methods and Procedures Committee continues to make its important contribution through securing, editing and circularizing the "Methods Ideas" which utilities find useful as thought-starters or specific aids to procedural improvement. They also are studying records retention and records management.

The Compendium Committee is in the process of preparing for publication an updated summary of all Accounting Section papers and articles.

Year in review

(Continued from page 5)

Alaska will become the nation's 47th natural gas consuming state in mid-1961 with completion of an 80-mile pipeline and a utility system in Anchorage. Started in the summer of 1960 by Alaska Pipeline Co. and Anchorage Natural Gas Corp., the new $17 million pipeline and distribution system will supply consumers with gas from wells discovered on the Kenai Peninsula in 1959.

New evidence of our industry's increased ability to meet peak winter consumer demands is reflected in the growth of facilities for the underground storage of natural gas.

At the start of 1960, our companies operated 209 storage pools capable of holding in reserve some 2.5 trillion cubic feet of gas—enough to serve the nation's needs for the two coldest months of the year. Ten years ago, the industry's 80 pools had a capacity of less than 500 billion cubic feet.

A December survey by A. G. A. shows that the gas industry spent about $76 million to expand its storage facilities in 1960. Approximately $700 million now has been invested in underground storage, and construction programs in the next several years will push this investment to more than $1 billion in 1963.

The gas industry's gross plant, which has almost tripled in the past 10 years to meet growing demands for gas, totals an estimated $21,850 million, up from $19,840 million a year ago. We forecast this figure will reach $23,576 million at the end of 1961 and nearly $45 billion by 1970.

Natural gas reserves

While gas use has climbed to an unprecedented high, proved recoverable reserves of natural gas in the United States also has risen to a new peak, assuring adequate long-range supplies for our customers.

Reserves reached 262.6 trillion cubic feet at the start of 1960. Despite net production amounting to 12.4 trillion cubic feet during 1959 (the last year for which official statistics are available), reserves were 8.5 trillion cubic feet greater than at the end of the preceding year. New reserves discovered in 1959—nearly 6 trillion cubic feet—were the third highest on record, exceeded only by discoveries in 1957 and 1953.

Substantial sales increases are anticipated in all major gas appliance and equipment categories in 1961, according to a year-end survey by the Gas Appliance Manufacturers Association. Sales are expected to exceed 8.7 million units, excluding gas refrigerators, air conditioners and gas lights. The estimate compares with 1960 sales of approximately 8 million.

The introduction of exciting and significant new appliances and components in 1960 reflects the gas industry's increased emphasis on the development and production of modern, competitive gas appliances and equipment for the home.

New gas ranges on the market can be hung on kitchen walls, mounted on cabinets or used as built-ins, with oven, broiler and rotisserie located above range-top level. Doors swing out rather than drop down, and one model features a "sliding drawer" top burner section. Other new ranges use advanced top burners with wide heat dispersion, permitting lower temperature turn-downs and more even heating of utensil bottoms. Still another new range, slated for 1961 production, employs a gas infrared top burner under glass for fast, cool cooking.

New gas refrigerators marketed in 1960 banish forever the need for defrosting; frost never forms, even in freezer compartments.

A new instantaneous, through-the-wall gas water heater provides hot water without a storage tank. Mounted against the outside wall of a room, it draws combustion air from outdoors and exhausts directly outdoors, eliminating the need for a chimney connection.

Low-temperature oven controls gained wider acceptance during the year as more manufacturers incorporated these devices in residential ranges. Settings as low as 140 degrees permit homemakers to prepare meals hours in advance and hold them at proper temperatures until ready to serve.

A trend also was noted toward compactness of gas appliance design, resulting in a blending of the space-saving advantages of free-standing appliances with the modern appearance of built-ins.

A. G. A. Laboratories

Activities at the A. G. A. Laboratories reached all-time highs in 1960, when thousands of gas appliances and accessories were tested for compliance with rigid gas industry standards. Items meeting these requirements were awarded the Laboratories' "Blue Star" approval seal or Listing Symbol.

Appliances submitted by manufacturers for A. G. A. testing and approval continued to incorporate new features of advanced design, performance and styling. The Laboratories also note manufacturer interest in the use of gas infrared burners, in appliances with sealed combustion chambers, and in equipment intended for installation in mobile homes.

A new department of approval and listing services, established in 1960, assumed administrative activities formerly under the testing and inspection departments. Organizational changes were made in both the testing and inspection departments, with emphasis placed on expanding services to manufacturers.

Broadened and accelerated inspection activities resulted in a sharp increase in unannounced factory inspections during the year. In addition, more than 500 announced inspections were conducted in connection with renewals of annual certifications of gas-fueled equipment.

Requirements activities included the preparation of revisions and additions to 25 gas industry approval and listing standards. These were adopted by A. G. A.'s Approval Requirements Committee and later approved as American Standards (ASA). Seven requirements investigation studies completed during the year provided data for various standards groups, and 23 approval and listing standards were undergoing re-evaluation at year's end.

The Laboratories' role in gas industry research also continued to strengthen in 1960. Thirteen major research projects were conducted under A. G. A.'s Promotion, Advertising and Research program, and 11 research publications were distributed to the industry.

Throughout this revitalized, forward-moving industry we see dramatic evidence that the gas business is mobilizing to meet its challenges with more vigor and determination than ever. We are confident that these signs on every hand point to continued gas industry growth and progress in 1961 and the years beyond.

LP-Gas sales

(Continued from page 12)

substantial future gains, as pilot operations in this type of secondary recovery have begun in several areas and show promise of developing into full scale projects.

The increased use of high purity LP-Gas as a propellant in pressurized product containers such as paint, insecticides, deodorizers, and shave creams, resulted in an appreciable gain in this small but constantly expanding market for liquefied petroleum gas.

Widespread extension of natural gas lines and mild weather resulted in about a 25 per cent loss in LP-Gas usage by gas utilities in 1960. Utility consumption should amount to about 137,000,000 gallons for the year.

The installation of large LP-Gas storage facilities for peak shaving purposes by natural gas utilities in 1960 served to lessen the decline in this demand. There is indication that large volume LP-Gas storage by natural gas utilities for use in peak shaving will continue to increase with the extension of natural gas pipelines.

The sale of light hydrocarbons during 1960 as raw materials for the manufacture of chemicals and chemical intermediates increased about 20 per cent, or 505,000,000 gallons, to a total of 3,031,000,000 gallons. Approximately one-third of this total volume consisted of ethane and ethylene, which were reported separately for the first time (as ethane) in the Bureau of Mines Mineral Market Report, No. MMS 3125, "Sales of Liquefied Petroleum Gases and Ethane in 1959." It is interesting to note that all ethane reported as sold for chemical feedstocks in 1959, occurred in only six states: Louisiana, West Virginia, Texas, Illinois, Kentucky and New Jersey.

It appears that in 1959 propane was preferred to butane as a chemical feedstock due to its lower cost per gallon. This preference probably accelerated during 1960 since refinery and synthetic rubber demands for the butanes and butylenes increased considerably as new alkylation units and synthetic rubber plants came on stream. The combined effect of these demands is that less butane is available for the LP-Gas market, except at premium prices. This trend is expected to continue through 1961. The use of ethane as a chemical feedstock increased more rapidly in 1960 than did the use of propane and this, too, is expected to continue.

There are about 120 new petrochemical projects planned or under way. This figure includes major additions to existing plants, synthetic rubber plants, as well as petrochemical plants that do not use ethane or LP-Gas as feedstocks. This compares with forty-seven such projects under way in September, 1958. This indicates that the increasing demand for petrochemicals during 1959 and early 1960 had reduced the margin between plant capacity and customer requirements to the point that expansion of capacity became desirable.

Polyethylene continued to expand its markets at a more rapid rate than its chief light hydrocarbon volume rivals, ethylene oxide and ethyl alcohol. Demand for ethylene to meet all these growing needs resulted in existing ethylene plants being increased in capacity, and numerous new plants being built.

Propylene recovery and production facilities are also under construction to supply the demands in the manufacture of polypropylene, propylene tetramer and other petrochemicals based on propylene.

A number of petroleum companies announced their entry into the petrochemical field during 1960, either on their own or in alliance with established chemical companies.

An estimated 550,000,000 gallons of LP-Gas, principally normal butane and butylenes were sold for the manufacture of rubber components during 1960. This also includes some ethylene feedstocks used for production of styrene going into the rubber program. This represents an increase of 7 per cent over the 1959 volume of 514,000,000 gallons. The increase would have been about double this, had automobile sales, especially of the standard models, come up to early industry expectations. As it was, the gain represented increased inventory due to the large number of new cars, primarily compacts, introduced during the year which required different sizes and types of tires. Export demand for rubber was also up sharply, and assisted in the increase. The greatly increased percentage of compact cars, which require less rubber per car, was a strong factor in limiting the increase.

It is estimated that 196,000 long tons of synthetic rubber capacity was added during 1960. About half of this is for production of the so-called "natural synthetic rubbers", polybutadiene and polyisoprene types.

LP-Gas production in 1960 kept pace with the increased demand through expansion of production facilities (including new plants) and better recovery from existing plants. Thirty-nine new gasoline plants and nine plant expansions were completed and placed on stream in the United States in 1960 to increase the daily production capacity by 3,200,000 gallons.

Canadian LP-Gas production capacity is still more than adequate for Canadian needs since the expanding local market does not require the total available capacity.

Approval to import Canadian natural gas into the United States has been granted by both the United States and Canadian regulatory bodies. Some 1,300,000,000 cubic feet per day will be imported as a result of this approval. This will affect the LP-Gas market in some extent in the West Coast area since the bulk of the gas will go to this area.

The continuing increased use of butane in chemical feedstocks and for gasoline blending indicates that less and less butane will be available to the domestic market in the future. This, of course, means that there will be increased activity by distributors and dealers in converting from butane to propane facilities, particularly in the South and Southeast, to serve the domestic market.

There is continued activity in increasing underground storage capacity in both mined and washed caverns. The total underground storage capacity for natural gas liquids in the United States is about 2,282,000,000 gallons. This is an increase of almost 17 per cent over 1959. The emphasis appears to be on mined caverns near heavy marketing areas where storage caverns cannot be washed due to lack of usable salt formations.

Where underground storage is not practical the industry is turning to refrigerated storage. The total refrigerated storage capacity for LP-Gas in the United States to date is estimated at over 11,000,000 gallons.

Advances in technical know-how, equipment and materials, plus increased promotional efforts should result in a substantial increase in refrigerated storage capacity in 1961. All these factors indicate that storage capacity will continue to keep pace with production and

market demands for LP-Gas.

Significant advances in the transportation of LP-Gas were made in 1960 to keep pace with industry growth. It is apparent that lower transportation costs resulting from these developments have been instrumental in sustaining the growth of the industry.

An important factor in LP-Gas transportation developments is the trend to larger capacity highway transports, both in "bobtail" delivery units and "over-the-road" units. Transports of over 10,000-gallon capacity, and 2,500 gallons and larger "bobtails" are gaining wide acceptance. In connection with these larger capacity units, the industry is developing high speed equipment and techniques for loading and unloading. Five hundred gallons per minute transport loading rate became a reality in 1960.

There is also continued interest in the use of positive displacement meters to provide rapid, accurate measurement of product.

A new development in LP-Gas transportation is the "piggyback" movement which has been approved by regulatory bodies. Whether this will become an important factor in LP-Gas transportation remains to be seen.

LP-Gas rail tank cars "grew" again with the introduction of the first 30,000-gallon tank cars. There is considerable interest in the larger tank cars but any trend toward widespread use of these cars may be dampened by the combination of increased water and pipeline movement which will provide a natural impetus to truck transportation.

The biggest developments in the transportation of LP-Gas in 1960 involve new pipelines devoted entirely to LP-Gas. One extends from Eunice, New Mexico to McPherson, Kansas, with branches to Minneapolis, Minnesota and Madison, Wisconsin. It is 2,200 miles long and has a capacity of 50,000 barrels per day. Nine terminals are located at strategic points on this new pipeline.

Another new pipeline has been announced which is scheduled to be in operation for the winter season of 1961-62. It is to extend from Mont Belvieu, Texas to Danville, Virginia with a number of intermediate terminals. It is planned to extend a spur line into southern Georgia; and underground storage at Hattiesburg, Mississippi and Demopolis, Alabama is to be connected to the main line by spurs. The line will extend a total of 1,355 miles including all of the spurs, and will have an initial capacity of 60,000 barrels per day.

Activity in water transportation of LP-Gas increased significantly in 1960. Several new barge terminals were completed and placed in operation. There was a rising interest in transporting refrigerated LP-Gas by both barges and ocean-going tankers.

NFPA Pamphlet 58 was again revised to keep pace with new and improved equipment and safe operating techniques.

Greatly increased efforts are being made at all levels of the industry to acquaint personnel with safe handling practice and techniques, particularly the proper methods of handling emergency situations.

Emphasis on LP-Gas merchandising increased greatly during 1960. This trend was sparked by aggressive competition from other fuels.

The National LP-Gas Council is conducting nation-wide consumer contests and similar promotion programs. The response and results have been excellent. Concurrently, many marketing producers have adopted trade name insignia as a part of new or increased advertising and promotional programs.

Numerous LP-Gas companies are still expanding their operations by providing better coverage of their territory. Some small LP-Gas distributors will continue to merge with or sell out to larger companies as capital requirements to continue tank lease programs remain high. More large, publicly financed distributors will appear as this trend continues.

As competition becomes more keen, both within the LP-Gas industry and with other fuel industries, more and more stress is necessarily placed on operational efficiency and improved management techniques. There is every indication that equipment, operating methods and individual ingenuity will keep pace and make it possible for the industry to continue to exhibit good growth rates in a highly competitive atmosphere.

Hawaii

(Continued from page 17)

ing director of the American Gas Association.

Among others scheduled to speak are S. F. Wikstrom, A. G. A., director of the PAR Program; Howard J. Goss, sales manager of the Harper-Wyman Company; Harold Massey, managing director, Gas Appliance Manufacturers Association, Inc.; Jack D. Sparks, director of marketing, Whirlpool Corporation; and Wendell C. Davis, president, Cribben and Sexton Company.

Representatives of the building industry will discuss the best way for gas appliance men to approach builders. An advertising specialist and top representatives in the retail field also will speak.

While an expected 200 delegates plus locally invited builders, architects and special guests hear both industrial and merchandising topics discussed, wives will be treated to special hospitality tours. And, promises Honolulu Gas Company, a touch of Hawaiian entertainment will be included in the conference.

For delegates making their first trip to Hawaii, the conference will provide a colorful study in contrasts. They will stay in Henry J. Kaiser's spectacular new Hawaiian Village Hotel within pebble's throw of placid blue waters and sun-splashed beach. Inside the hotel they will view up-to-the-minute exhibit booths and hear discussions that reach sharply into the future. Yet their leisure time will be filled with the dreamy and unsophisticated music of Old Hawaii and they will probably take tours that point out the battle grounds and dwelling places of kings who once ruled the islands. And as dusk falls at Hawaiian Village, convention goers may note with satisfaction that the torches that artistically light grounds and shrubbery are—naturally—gas torches.

The second Mid-Pacific Gas Conference in Honolulu, says Honolulu Gas Company president J. C. Stopford, "is a significant example of Hawaii's importance as meeting place for East and West.

"Hawaii, as crossroad of the Pacific, has both responsibility and challenge to bring together people from many parts of the world for the industrial, cultural and diplomatic betterment of all," Mr. Stopford pointed out.

"It is a pleasure for Honolulu Gas Company to take part in the ever-increasing role of the 50th State as host to truly international meetings of economic and civic leaders."

Industry news

Approve Northern Natural-Permian merger

STOCKHOLDERS of Northern Natural Gas Co., Omaha, Nebr., and Permian Basin Pipeline Company, at separate recent meetings approved a merger of the companies. Northern presently owns 93.2 per cent of the common stock and 57.9 per cent of the preferred stock of Permian.

Authorization of the Federal Power Commission is necessary before this merger can be effective. An application for that authorization is pending before the commission.

Northern would be the surviving company in the merger. It could exchange .45 of a share of its common stock for each of the 169,134 shares of Permian common stock outstanding and one share of its newly authorized 5.75 per cent cumulative preferred stock for each of the 34,125 shares of Permian's cumulative preferred stock outstanding as of the effective date of the merger.

Long-standing Pittsburgh ban excepts gas-fired refuse disposers

PITTSBURGH, Pa., which has the strictest air pollution regulations in the nation, has approved residential use of the new gas-fired automatic smokeless-odorless disposers.

Approval of the new units required reversal of a long-standing ban on any type of home refuse incinerator in Pittsburgh and the 128 surrounding communities in Allegheny County. New regulations were issued effective October 1, 1960, after it was proved to the satisfaction of Herbert J. Dunsmore, director of the Allegheny County Smoke Control Bureau, and his staff that the new gas-fired disposers can incinerate refuse without giving off smoke or objectionable odors.

Requirements for relief valves, shutoff devices made immediately mandatory

APPROVAL requirements for relief valves and automatic gas shutoff devices which became effective January 1, 1959, have been made mandatory for all manufacturers as of January 1, 1961, according to an announcement by the A. G. A. Laboratories.

This represents a departure from the Laboratories' policy, which normally allows manufacturers a period of five years in which to comply with revised approval requirements.

A circular letter to all manufacturers concerned, mailed by the Laboratories in November, 1960, read in part:

"The Approval Requirements Committee has approved both the proposed revisions (to effect correlation of the relief valve test with the ASME Boiler Code, which had been modified recently) and the retroactivity of the requirements. Accordingly, the Laboratories can accept for test immediately relief valves for use on storage tanks of hot water supply systems having heat inputs not in excess of 200,000 Btu per hour. Further, all relief valves and automatic gas shutoff devices produced after January 1, 1961, regardless of the date of their listing, that have not been tested and found to comply with the American Standard Listing Requirements for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems effective January 1, 1959, will be considered non-certified and their listing will be omitted from the January 1, 1961, Directory."

New A. G. A. bulletin describes secondary aeration in gas burners

THE MORE effective use of secondary air in a gas-burner application is discussed in a new research bulletin recently issued by the A. G. A. Laboratories.

Research Bulletin 84, *Principles of Secondary Aeration of Atmospheric Gas Burners,* describes research performed by the A. G. A. Laboratories under A. G. A. PAR project DA-2-GU sponsored by the A. G. A. Committee on Domestic Gas Research.

At least half of the air supporting combustion of flames in most contemporary gas appliances is secondary air or air that diffuses into the flames after combustion has begun. In spite of its importance, this study of the effective use of secondary air is a relatively new field of research. The objective was to determine conditions that allow a minimum of secondary air for complete combustion and to provide information on appliance design concerned with performance efficiency, compactness of combustion space, and other factors allied to these characteristics.

In view of the basic nature of this study, simple rectangular and cylindrical combustion chambers principally were used throughout the investigation. Recirculation flow patterns were observed, with smoke and with a schlieren optical system, through glass end walls in the combustion chamber.

It was concluded that recirculating inert combustion products of the flame cause incomplete combustion by contaminating or diluting the secondary air supply. Consequently, the minimum amount of secondary air necessary to obtain complete combustion is directly related to the tendencies of combustion products to recirculate in a given combustion chamber-vent system combination.

The tendency of a combustion system to promote recirculation is dependent on the geometry of the combustion chamber. Any design factor which conserves the momentum of the flame jet by maintaining a high velocity of flame gases through the chamber will inhibit recirculation.

Research Bulletin 84 presents a number of additional observations and conclusions from this research, which offers a qualitative guide in obtaining minimum secondary aeration for complete combustion as well as in correcting conditions causing combustion failure.

Research Bulletin 84 was written by E. J. Weber of the Laboratories research staff. Copies of the bulletin are available from the A. G. A. Laboratories, 1032 East 62nd St., Cleveland 3, Ohio, or A. G. A. Headquarters for $2 each. Catalog number 136/DR should be specified.

Discuss German expansion of natural gas service

A. G. A. Managing Director C. S. Stackpole discusses U.S. natural gas operations with German gas industry representatives. Above (l. to r.): Jurgen Stech, director, Technischen Werke der Stadt Stuttgart; Mr. Stackpole; Heinrich Kaun, of TWSS; J. P. Kazickas, Saljoan Coal and Coke Corporation

See practical central heating for drive-ins

Russ Allen (r.), of Durant and McAlpine, heating contractors, has designed what Michigan Consolidated Gas Company considers the nation's first warm-air heating system for outdoor theatre goers. Installed in a drive-in owned by Nicholas George (l.), the gas-fired system will air condition in summer

NACE announces four corrosion short courses

THE NATIONAL ASSOCIATION of Corrosion Engineers, Houston, Texas, has announced that four short courses on corrosion that it has sponsored or endorsed have been scheduled for presentation this year.

The Houston section of NACE will hold a corrosion short course February 2 and 3, 1961, in Houston, Texas. Subjects to be dealt with there include corrosion control in transmission pipeline systems and corrosion in oil and gas production, in refineries and chemical plants, and in commercial and residential construction.

A similar annual short course sponsored by the Shreveport section of NACE has been scheduled for February 14 and 15, 1961, in Shreveport, La.

The sixth annual Appalachian Underground Corrosion Short Course, endorsed by NACE, will be held June 6 through 8, 1961, under the sponsorship of the University of West Virginia, Morgantown, W. Va.

The Appalachian short course, which was attended by 600 in 1960, will cover basic, intermediate, and advanced education of corrosion control practices as related to underground pipe, cable, and water systems. About 69 papers have been scheduled, and there will be field demonstrations. A copy of all papers presented will be sent in book form to those who attend.

Information regarding the Appalachian short course may be obtained from John H. Alm, Dearborn Chemical Co., 2 Gateway Center, Pittsburgh 2, Pa.

The fourth short course in corrosion control will be held under the sponsorship of the Greater Boston section of NACE June 20 through 22, 1961, in Boston, Mass.

Utility is four-time winner

A. G. A. Safety Manager Ravel Papich (r.) and L. T. Williams, safety director, Citizens Gas and Coke Utility, Indianapolis, Ind., inspect four A. G. A. plaques awarded to Citizens for having the lowest disabling injury rate in its class

Oil cost-cutting discussed

COST-CUTTING, a matter of prime importance in the oil industry today, was the general theme of the 1960 Panhandle Plains Regional meeting of the Natural Gasoline Association of America held recently in Amarillo, Texas. Practical means of achieving this end were explored in technical papers dealing with gas processing plant control, more efficient processing methods, and corrosion mitigation in the plant.

In the principal address of the day, "The Key to Plant Economy," Wallace Williams, of Phillips Petroleum Company, related the critical role of the employee in this process.

A panel discussion, "Improved Plant Practices Clinic," was held. The discussion was followed by a film, "The Candid Truth about Social Security."

Energy study published

ENERGY in the American Economy 1850-1975, Its History and Prospects is a new book dealing with the abundant use of energy in America. Authors are Sam H. Schurr, Bruce C. Netschert (with Vera F. Eliasberg), Joseph Lerner, and Hans H. Landsberg. The book was published by Johns Hopkins and costs $12.50.

This comprehensive study provides a background for answers to many vital questions of fact and policy concerning energy in the U. S. economy. Part I is an analytical history of the period of more than a century in which fuel dominance shifted from wood to coal and from coal to gas and oil and which saw the rise of electrification. Part II assesses future demands for energy from a detailed analysis of consumption within sectors and of other data presented in full, with voluminous appendix tables. Part III assesses future energy supply, presenting estimates against the background of a comprehensive survey of all recent estimates of the reserves and resources of coal, oil, gas, and hydropower. This treatment provides a basis for evaluating future prospects for atomic and solar energy and new sources on which explicit data are scanty or non-existent.

Mr. Schurr is director of the energy and mineral resources program of Resources for the Future, Inc. Mr. Netschert, Vera Eliasberg, and Mr. Landsberg are research associates for that organization. Mr. Lerner is industrial specialist, fuel and energy office, U.S. Office of Civil and Defense Mobilization.

Gascool announces new air conditioning systems

THREE AIR CONDITIONING systems, new three-, 10-, and 15-ton units, have been developed by the Gascool division of Vector Engineering Contractors, Garland, Texas, to complete a series of natural gas or LP-Gas-powered air conditioning systems for residential or institutional use.

The company claims that in extensive tests, the cost of operating a Gascool system was proved to be as much as 61 per cent less than comparable (output) systems using other means of power.

Average fuel requirement of the equipment is only 20 cubic feet of 1,000 Btu natural gas per ton-hour of operation. LP-Gas fuel consumption is claimed to be less than 1/5 of a gallon per ton-hour.

Completely automatic thermostatic temperature control and an extremely low operating noise level are advantages of Gascool units. This latter feature is due to the design of the Fiberglas-insulated cabinet and special muffler installation. There is also a roof-mounted, one-unit system that both heats and cools.

Third gas cooler developed by Bell and Gossett

AIR CONDITIONING and refrigerating units that operate with natural gas-fueled engines are the latest development of Bell and Gossett Co., Morton Grove, Ill.

The company now makes three basic cooling units for industrial and commercial use.

The liquid cooler unit contains compressor, condenser, heat exchanger, centrifugal pumps, and evaporator. The unit is entirely automatic and is enclosed in a steel frame.

The refrigeration condensing unit series includes 12 units ranging in capacity from seven and a half tons to 150 tons. Bolts rather than welding are used in their construction to simplify maintenance.

The new engine compressor unit has an infinite modulation range from 1,800 to 1,200 rpm. Its lubrication supply oils the unit for 2,000 hours—a full season—without need for refilling.

To be gas heated from the top

One of two 27-ton Superior gas boilers is lifted to top floor of new office building under construction for The Brooklyn Union Gas Company

Natural gas may light Pakistani streets

THE FOLLOWING is quoted verbatim from an article printed in a recent issue of *The Chronicle* of Karachi, Pakistan:

"With the discovery of natural gas in Pakistan, the chances for solution of the shortage of electricity have greatly increased. The fact that gas is also cheaper than electricity is also very heartening for the consumers in Pakistan.

"Many American Companies and specially the Arkala Air Conditioning Corp: Evensville, India, USA have developed gas air-conditioning and gas flare lamps for strip and street illumination, which are best suited to our conditions.

"All along the way from Sui in Baluchistan to Karachi and Sui to Multan, the areas have numerous towns and important villages, which do not as yet have the amenities for street lighting because of the shortage of electric supply. If we adopt the American system of gas illumination, our lighting problem in the interior towns will be greatly solved."

Plan 89 topics for Southwestern gas measurement course in April

THE GENERAL committee of the Southwestern Gas Measurement Short Course at its recent fall meeting completed selection of 89 class subjects and instructors for the program of the 1961 short course.

The 36th short course will be held at the University of Oklahoma, Norman, Okla., April 18, 19, and 20, 1961.

Outstanding men from oil and gas companies and manufacturers in the field of gas measurement and regulation have been selected as instructors. Thirty-three manufacturers will have educational exhibits, with representatives in attendance to answer questions and discuss application of the items exhibited.

Two honored for saving life cite utility's safety instruction program

THREE employees of Northern Illinois Gas Co., Aurora, Ill., recently received the president's award for the saving of human life. The awards were presented by Marvin Chandler, president, at the utility's recent annual management conference.

Two of the three have credited the company's safety training in artificial resuscitation with saving the lives of their daughters.

Ronald Brown, of the utility's customer service department, applied mouth-to-mouth resuscitation to his six-months-old daughter after she experienced a breath stoppage.

Leslie Ream, of the gas company's operating department, applied mouth-to-mouth resuscitation to his 13-year-old daughter after she stopped breathing while in bed one night.

Ken Mueller, of the meter reading department, pulled an elderly couple from their sunken vehicle after the car plunged off the road and into water as the result of a flat tire.

Thirteen employees have received the president's award, which was established by the company's board of directors in 1955 "to recognize individual heroism, presence of mind, and prompt action of employees resulting in the saving of human life."

Armco installs Driam machines

ARMCO Steel Corp., Middletown, Ohio, has announced plans to spend $2.5 million to consolidate its spiral-welded pipe manufacturing operations in a modern fully integrated plant in Middletown.

Logan T. Johnston, president of Armco, said that four new buildings with 207,000 square feet of floor space will be erected to accommodate the pipe-manufacturing facilities presently located at the company's main fabricating plant. Two new Driam pipe machines will be installed in the new layout.

The Driam machines will incorporate the latest inventions and improvements in the manufacture of spiral-welded pipe. They will produce pipe with inside and outside welds and with 100 per cent rated joint strength. This product is in growing demand, particularly in the public utilities market.

Fashion show spotlights Gold Star range

Pots, pants, and a Gold Star gas range were in the spotlight at the annual meeting of the Fashion Group, New York, N. Y. Surrounded by high-fashion models, Craig Claiborne, food editor of "The New York Times," produced culinary masterpieces over a blue flame. Nine hundred attended the show

Dixie consolidates divisions as Magic Chef

S. B. Rymer, Jr.

THE BOARD of directors of Dixie Products, manufacturers of gas and electric ranges, home freezers, and soft drink vending machines, has announced the consolidation of its divisions under the corporate name, Magic Chef, Inc., effective immediately.

Magic Chef, a gas range manufacturer, has been a division of Dixie Products since it was purchased from Food Giant Markets in 1958. Magic Chef and Dixie had operated separately under one board of directors.

The new corporation will continue to operate its subsidiaries, Dixie-Narco, Ranson, W. Va., and Cocinas Dixie de Venezuela, Caracas, Venezuela, and has announced plans to establish a new subsidiary in Barcelona, Spain.

S. B. Rymer, Jr., president of Dixie and Magic Chef, who has become president of Magic Chef, Inc., said the consolidation will enable Magic Chef to greatly expand its gas range line, which is currently in the medium- and high-price class, and to enter the electrical appliance industry for the first time in its history.

Magic Chef will introduce a new line of gas and electric free-standing and built-in ranges and a line of home freezers at the Chicago International Home Furnishings Market in January, 1961.

Gas and electric ranges will be produced in plants at Cleveland and Franklin, Tenn. The combined facilities of the two plants have a production capacity of 1,700 ranges per day, according to Mr. Rymer.

Mark two million safe hours

SOUTHERN CALIFORNIA Gas Co., Los Angeles, Calif., has been awarded the A. G. A. Safety Merit Award for two million man-hours worked, without a lost-time accident.

Averaging 106 employees over the period from July 1, 1951, through July 31, 1960, the meter shop of the company's measurement department at Pico-Rivera has compiled the outstanding record of 2,006,312 man-hours worked without a single serious mishap. W. F. Conner supervises the award-winning group.

Earl E. Taylor, former safety engineer with the company, presented the award on behalf of the A. G. A. Accident Prevention Committee. The presentation was one of his last official acts for the company as safety engineer. He retired November 1, 1960. He had served the company for nearly 30 years, 20 of which were spent in safety work.

Caloric, Tokyo firm cooperate for overseas manufacture of gas ranges

HOMEMAKERS in Japan and other Far Eastern countries will soon have American-style gas appliances, designed and engineered in the U.S. but built in Tokyo, Japan, under a long-term licensing agreement recently signed in Tokyo by Kanto Gas Appliance Co., Ltd. and Caloric International, S.A. The latter firm is the overseas arm of Caloric Appliance Corp., Jenkintown, Pa.

Although U.S. manufacturers have supplied some component parts for Japanese appliances, the agreement is the first in which a U.S. gas appliance firm has arranged to assist a Far Eastern company in the manufacture of complete units. Caloric will provide technical advice on mass production techniques and may, if necessary, license certain appliance patents.

Kanto will manufacture the appliances and has been authorized to distribute them in the key market of Japan and in Korea, Taiwan, Singapore, Hong Kong, Okinawa, and the Philippines. Resident liaison personnel will be exchanged by Kanto and Caloric.

The Japanese-built appliances, according to Robert Klein, Caloric vice president who signed the agreement, will be specially designed for the Far Eastern market. Citing typical examples of differences between U.S. and Far Eastern appliances, Mr. Klein said, "Japanese ranges are four inches lower than U.S. models. Many Japanese gas ranges have only three burners, but almost all American models have at least four. There are no broilers in low-price Japanese ranges, but even the cheapest ones on the U.S. market have this feature.

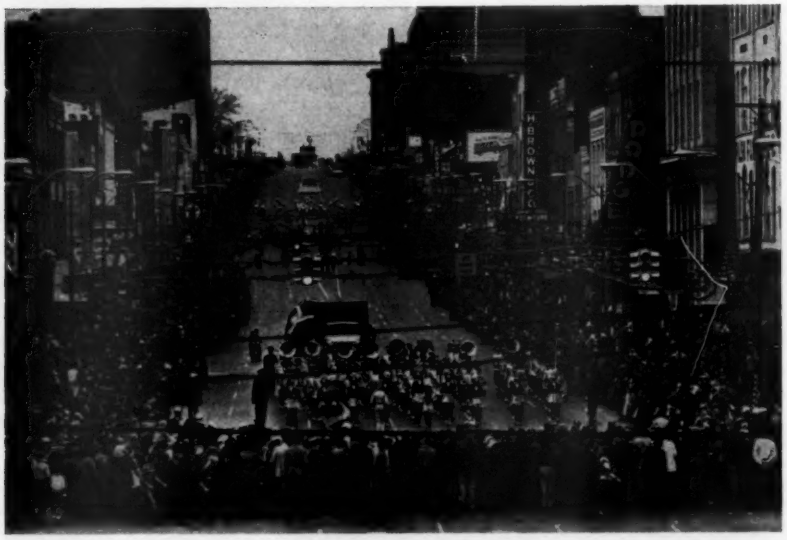
"A more basic difference," he said, "is Japan's use of manufactured rather than natural gas."

Kanto, according to its president, Seishiro Hayashi, was formed in 1959 for mass production of appliances. "The continuing improvement in living standards in Japan has caused a tremendous growth in the gas appliance market. For example, recent studies indicate that there were less than two million gas users in Japan in 1953 and that by 1962 this figure is expected to pass four-and-a-half million," he said.

The Japan Gas Association in a recent study estimated that only about 41 per cent of the people use gas in the areas where it is available and that only 16 per cent of the entire population uses it.

A population movement to the urban areas of Japan has accelerated the demand for gas. An estimated 62.5 per cent of Japan's people live in cities and 37.5 per cent in the country. This is a complete reversal of the percentages of 1950.

Nashville Gas Company's parade draws 150,000



Thousands who love a parade were packed a dozen deep in Nashville, Tenn., to watch the annual Christmas parade. Santa Claus stole the show aboard the sleighlike float of the Nashville Gas Company, which yearly sponsors the parade. Nashville's police department estimated the crowd at 150,000

Patent Hawaiian 'luau' torch

THE GAS-FIRED *luau* torch, traditional symbol of Hawaiian hospitality, has been patented.

Now selling in considerable quantity in mainland areas, the unique torch was developed by engineers of Honolulu Gas Co., Honolulu, Hawaii, beginning about 1953. The torches now are numbered in the thousands in Honolulu. Hotels, restaurants, and many hundreds of island residences use them.

Preceding the granting of statehood to Hawaii a giant gas *luau* torch burned day and night on Tantalus above Honolulu and was extinguished only when Congress passed the historic bill.

The torches are manufactured both in Honolulu and on the West Coast of the U.S.

Laclede posters win art award

THE WHIMSICAL hard-sell outdoor posters of the Laclede Gas Co., St. Louis, Mo., have won two gold medals and two merit awards in the third annual exposition of advertising art of the Art Directors' Club, of St. Louis. The posters, showing a comical, cartoon-style dog in home-style situations, were developed to create a casual and friendly image of the utility and to focus consumer attention on the straight-copy theme.

The first designs (two were used each month for added impact) went up on 100 billboards in St. Louis and St. Louis County in July, 1960, to deliver the hard-sell message to more than 1,400,000 persons daily.

Gas firm enters electronics

UNION TEXAS NATURAL Gas Corp., Houston, Texas, has announced it will enter the field of applied physics and advanced electronics through a new company, Quantatron, Inc., Santa Monica, Calif.

Richard T. Lyons, president of Union Texas Natural, said that in addition to immediate product development and manufacturing, Quantatron will conduct research work on both a short-term and long-range basis in the interest of developing additional products for industry and government use.

Robert M. Salter, Jr., has been named president and general manager of Quantatron, with headquarters in Santa Monica.

Plan new gas main network for World's Fair

Field engineers James McCormack, Stephen Reichel, and Harvey Osgood, of The Brooklyn Union Gas Company, check 20-year-old maps that show location of gas mains at Flushing Meadows, N. Y., site of the last World's Fair. A network of new pipes will be installed there for the 1964-1965 World's Fair

LP-Gas Council announces winners in 1960 sweepstakes promotion

CHRISTMAS came early for 152 lucky winners of prizes in the National LP-Gas Council's 1960 sweepstakes promotion.

Robert E. DuRant won the top prize in the competition—a $25,000 air conditioned home, completely equipped with the latest LP-Gas appliances.

Mr. DuRant was one of 253,817 people to enter the second annual sweepstakes. He obtained his official entry at the office of The Protane Corp., Orlando, Fla.

Frank T. Carpenter, president of the council for 1960, called him from Phoenix, Ariz., while the council's directors were in session during their fall meeting.

The second prize, a $3,600 International Harvester LP-Gas tractor, was won by Mrs. Carl Christiansen, a farmer's wife who lives near Milaca, Minn. She filled out her winning entry blank at the Milaca office of Northwest Natural Gas Company.

The winning sweepstakes entry blanks were drawn by Don McNeill, popular radio master of ceremonies.

Issue list of A. G. A. publications for January

ACCIDENT PREVENTION

- **How Injuries to Gas Men Might Be Avoided,** Volume IX, December, 1960, Issue IV. Accident case histories. To nonmembers, 10 cents each. To members—one copy, free; two to 50 copies, 10 cents each; 51 to 99 copies, seven cents each; 100 to 500 copies, five cents each. Cat. no. 7/AP/60-4.
- **Safety Siftings, September,** 1960, Issue 3. Digest of articles from company safety bulletins. To non-members, 10 cents each. To members—one copy, free; more than one copy, 10 cents each. Cat. no. 21/AP/60-3.
- **Safety Siftings, December,** 1960, Issue 4. To non-members, 10 cents each. To members—one copy, free; more than one copy, 10 cents each. Cat. no. 21/AP/60-4.

RESEARCH

- **High Speed Deck Oven Design and Baking Studies,** Research Bulletin 85, by D. M. Spinell. $2. Cat. no. 36/IR.
- **A Study of Methods of Grease Removal from Commercial Kitchen Exhaust Air,** Research Report 1,323, by W. L. Marn. $1. Cat. no. 37/IR.
- **Principles of Secondary Aeration,** Research Bulletin 84, by E. J. Weber. $2. Cat. no. 136/DR.
- **Gas Vent Tables,** Research Report 1,319, by E. H. Perry. $1. Cat. no. 137/DR.

INDUSTRIAL AND COMMERCIAL GAS

- **The Use of Natural Gas in Open Hearth Furnaces,** Information Letter 119, by V. B. Thompson. First 25 copies, free; 26 or more copies, 25 cents each. Cat. no. 110/I.

PROMOTION

- **Gas Heating File.** Folder containing literature on house heating. 50 cents. Cat. no. 87/P.

HOME BUREAU

- **Refrigeration and Air Conditioning in Today's All-gas Home.** Reprint from *What's New in Home Economics.* Five cents each. Cat. no. 90/K.

Arkla redesigns room circulators

Arkla-Humphrey Radiantfire gas room circulators for 1961 emphasize outward appearance with new leather-grain panels, retain durability, efficiency

Highlights of cases before the Federal Power Commission

Bureau of Statistics, American Gas Association

Certificate cases

● **El Paso Natural Gas Co.** has filed a budget-type application proposing the 1961 construction of not more than 30 main line taps, not more than 15 main line measuring and regulating stations, together with one or two lateral lines at a combined cost of not more than $800,000. In a second application, the company has proposed to construct natural gas facilities from time to time during 1961 to expedite the acquisition of additional gas reserves adjacent to its pipeline system. Each project would not exceed a cost of $500,000, and all facilities would be limited to a total cost not exceeding $5 million.

● **Hope Natural Gas Co.** has been authorized to replace eight obsolete 1,000 horsepower steam engine units at its Jackson, W. Va., station with modern units totaling 1,980 horsepower at a cost of about $1 million. Lower gas production from the area allows the use of smaller compressor capacity.

● **Lone Star Gas Co.** has filed a budget-type application for 1961 construction of natural gas facilities required to attach new gas supplies when available. The cost of all projects would not exceed $1 million, and each project would be limited in cost to $250,000.

● **Mississippi River Transmission Co.,** a newly formed subsidiary of Mississippi River Fuel Corp., has been authorized to construct natural gas facilities estimated to cost about $9.8 million. The authorization includes about 94 miles of pipeline extending from a point on Trunkline Gas Company's system in Clay County, Ill., to the area of St. Louis, Mo. These facilities will be used to take 50 million cubic feet of natural gas daily from Trunkline Gas Co. for delivery to Laclede Gas Co. and Illinois Power Co. Laclede has been allotted 42.5 million cubic feet daily, with the remaining 7.5 million cubic feet daily for sale to Illinois Power.

● **Natural Gas Pipeline Company of America** has been granted temporary authority to construct a 33-mile supply lateral at a cost of $1.1 million in the Normanna Field, Texas, where it has about 88 billion cubic feet of natural gas under contract. Temporary authority has been granted in another application to construct nearly 55 miles of lateral supply pipeline at a cost of $3.2 million in the Thompsonville and Taquachie Creek areas of Texas where the output of six independent producers is under contract.

● **Natural Gas Storage Company of Illinois** has sought authority to supercharge three existing 2,000 horsepower engines to 2,800 horsepower each, to drill seven injection-withdrawal wells, and to add appurtenant facilities in the Herscher storage field at a combined estimated cost of $1.9 million. These facilities would increase maximum daily withdrawal from storage by an additional 75 million cubic feet of natural gas.

● **Northern Natural Gas Co.** has received approval of its budget-type application to construct facilities when needed during 1961 to attach newly acquired natural gas reserves. The cost of individual projects will not exceed $500,000, and the cost of all projects will not exceed $2 million.

● **Panhandle Eastern Pipe Line Co.** has also been authorized to construct facilities as required for securing new gas supplies during 1961. In its budget-type proposal, single projects will not exceed a cost of $500,000, while all projects will not exceed a combined cost of $2.5 million.

● Budget-type construction applications by **Tennessee Gas Transmission Co., Texas Eastern Transmission Corp.,** and **United Gas Pipe Line Co.** have been accepted for filing by the FPC.

● **Tennessee Gas Transmission Co.** has proposed to construct facilities having a total cost not in excess of $5 million, with each project not to exceed a cost of $500,000.

● **Texas Eastern Transmission Corp.** will construct facilities at a total cost of $4 million, with single projects limited to a cost of $500,000.

● **United Gas Pipe Line Co.** has sought facilities whose over-all cost would not exceed $3 million, while individual projects would not exceed $400,000. The proposed facilities would enable the companies to take into their main line transmission systems natural gas purchased from independent producers in the general area of their existing pipelines.

● **Trunkline Gas Co.** has been authorized to construct about 155 miles of 30-inch main line (paralleling sections of its existing system), about 69 miles of supply line in Louisiana, and appurtenant facilities at a combined cost estimated in excess of $25 million. These facilities will be used to increase daily sales capacity by 95 million cubic feet of natural gas. A new customer, Mississippi River Transmission Co., will receive 50 million cubic feet daily. Other new customers, Northern Indiana Public Service Co., Central Illinois Electric and Gas Co., and the City of Rensselaer, Ind., will be allotted a combined total of 25 million cubic feet daily. The remainder has been allocated to four existing customers and to the parent Panhandle Eastern Pipe Line Co., whose requirements have been set at nearly 18 million cubic feet per day.

Rate cases

● **Hope Natural Gas Co.** has had its proposed $3.6 million or 5.8 per cent annual wholesale natural gas rate increase suspended until May 1, 1961, when it may be put into effect, subject to refund. The proposed increase, which would affect six utility customers in New York, Ohio, Pennsylvania, and West Virginia, includes the inauguration of an interruptible rate and a change in the large general service rate from straight commodity to a two-part demand-and-commodity rate. The proposed higher rates are intended to offset larger wage payments and increased purchased gas costs. In addition, the company has claimed a 10 per cent return on its wellmouth properties and a 6¾ per cent return on its other properties. Still pending are three rate increases totaling about $11 million and being collected subject to refund.

● **Texas Gas Transmission Corp.** has had its $4.7 million or 4.4 per cent annual wholesale natural gas rate increase suspended until May 6, 1961, when it may be put into effect, subject to refund. Higher operating, construction, and purchased gas costs, plus the need for a 6½ per cent rate of return have been cited as justification for an increase in rates. The adjusted rates would affect about 70 utility customers in Arkansas, Illinois, Indiana, Kentucky, Louisiana, Mississippi, Ohio, and Tennessee.

● **Tennessee Gas Transmission Co.** has been given permission to put into effect its reduced rate filing, subject to refund. An interim order by the FPC reducing a proposed 7 per cent rate of return to a return of 6⅛ per cent was followed by a company application to reduce a requested rate increase of $26.6 million to $10.7 million on an annual basis. The rates affect some 100 utility customers in 13 states along the company's Texas-to-New-England pipeline system. Plans were also approved for refunding, with interest, some $6.3 million collected from April 5 to September 30, 1960, under the former rate increase.

● **Transcontinental Gas Pipe Line Corp.** has recently had its $11.8 million or 7 per cent annual wholesale natural gas rate increase suspended until April 17, 1961, when it may be put into effect, subject to refund. The proposed new rates are based on higher purchased gas costs, higher operating costs, and the need for a 6½ per cent rate of return. Approximately 75 wholesale customers operating in Alabama, Georgia, Maryland, New Jersey, New York, North Carolina, South Carolina, Pennsylvania, and Virginia would be affected by this increase.

SUMMARY OF INDEPENDENT GAS PRODUCER RATE FILINGS—OCTOBER, 1960

	Number	Annual Amount
Tax rate increases allowed without suspension	—	$ —

Other rate increases allowed without suspension	20	176,347
Rate increases suspended	181	3,739,253
Total rate increases	201	3,915,600
Tax rate decreases allowed without suspension	—	—
Other rate decreases allowed without suspension	2	3,655
Total rate decreases	2	3,655
Total rate filings (all types)	533	
Total rate filings acted on from June 7, 1954, to October 31, 1960	50,295	
Rate increases disposed of after suspension (during month)	13	1,840,172
Amount allowed	—	1,799,375
Amount disallowed	—	39,439
Amount withdrawn	—	1,358
Rate increases suspended and pending at end of month	3,607	$169,004,859

SUMMARY OF PIPELINE COMPANY RATE FILINGS—OCTOBER, 1960

	Number	Annual Amount
Increases under suspension at beginning of month	112	$439,257,900
Increases suspended during month	2	11,000
Increases disposed of after suspension	2	22,111,200
Amount allowed	—	17,276,700
Amount disallowed	—	4,834,500
Amount withdrawn	—	—
Increases allowed without suspension	—	—
Increases suspended and pending at end of month	112	$417,157,700

In other FPC actions, Iroquois Gas Corp. has been authorized to acquire and operate the facilities of its affiliate, Penn-York Natural Gas Corp. Both companies are wholly owned subsidiaries of National Fuel Gas Co. in another filing, Northern Natural Gas Co. has proposed to acquire by merger all the existing natural gas facilities of its subsidiary, Permian Basin Pipeline Co. The proposed merger would simplify the physical operation of the combined systems.

SUMMARY OF PIPELINE COMPANY CERTIFICATE FILINGS AND ACTION—OCTOBER, 1960

(Construction and operation only)

	Number of Applications	Miles of Pipeline	Compressor Horsepower	Estimated Cost
Pending at beginning of month*	204	6,618	548,000	$805,448,182
Filed during month	19	323	29,040	52,923,372
Issued during month	26	107	4,550	11,545,912
Otherwise disposed of during month	—	—	—	—
Pending at end of month	197	6,834	572,490	$846,825,642

* Adjusted to include amendments and supplements to applications and modifications of certificates.

GAMA elects 11 firms to membership, bringing enrollment to 576

ELECTION of 11 manufacturing companies to membership in the Gas Appliance Manufacturers Association has been announced.

The new members bring the association's enrollment to 576 manufacturing firms. Collectively these manufacturers produce about 95 per cent of all the household, commercial, and industrial gas equipment made in the U. S. today.

The new members are Capitol Manufacturing Co., Columbus, Ohio; Driam Corp., Manitowoc, Wis.; Ducane Heating Corp., Totowa, N. J.; Glo-Fire, Inc., Elsinore, Calif.; Joslyn Manufacturing and Supply Co., Chicago, Ill.; La Mere Industries, Walworth, Wis.; Meynell Manufacturing Co., Erie, Pa.; Mt. Hawley Manufacturing Co., Peoria, Ill.; Ronan and Kunzl, Marshall, Mich.; Victor Engineering Contractors, Dallas, Tex.; and E. H. Wachs Co., Chicago, Ill.

Study on economics of petroleum industry scheduled for March

A TWO-DAY study devoted to economics of petroleum exploration, development, and property valuation will be held in Dallas, Texas, March 16 and 17, 1961. Presented by the International Oil and Gas Educational Center, the program will be conducted at the Southwestern Legal Center on the campus of Southern Methodist University.

Some of the subjects slated for review include "Petroleum Exploration—Gambling Game or Business Venture?," "Reducing Hidden Exploration Costs," and "The Ever-changing Fair Market Value."

Serving as chairmen during the program will be Frank B. Conselman, vice president of the American Association of Petroleum Geologists; Norman C. Smith, consulting geologist; R. C. Earlougher, petroleum engineer; and R. M. Swesnik, vice president of General American Oil Company of Texas.

Additional information or copies of the program may be obtained from the International Oil and Gas Educational Center, 3315 Daniels, Dallas 5, Texas.

New Jersey restaurateurs endorse use of gas in new headquarters

THE NEW JERSEY Restaurant Association has adopted gas as a fuel in its new headquarters in Menlo Park, N. J. The building housing the new offices features gas heating, air conditioning, incineration, cooking, and outdoor lighting, all gas-fueled by Elizabethtown Consolidated Gas Co., Elizabeth, N. J.

The membership of NJRA consists exclusively of restaurant owners, whose many uses of gas in the new headquarters would seem to indicate that they are sold on gas.

The association was organized in 1947, with a handful of members and a small office in Newark, N. J. It has grown since then to an organization of over 500 members and 70 associate members. Its emblem is a symbol used in 29 of the United States.

The purpose of NJRA is to represent the best interests of the restaurant owners in New Jersey. This is done primarily by working committees within the organization.

The association each year sponsors a restaurant exhibit, where manufacturers and dealers may display their products.

The new offices of the New Jersey Restaurant Association feature all-gas heating, air conditioning, incineration, cooking, and outdoor lighting. Elizabethtown Consolidated Gas Company furnishes fuel

Personal and otherwise

Trade group re-elects four

ALL FOUR of the executive officers of the National Warm Air Heating and Air Conditioning Association were re-elected for 1961 at the trade group's annual meeting held recently in Cleveland, Ohio.

Named to head the trade association again is Harry C. Gurney, general sales manager, Janitrol Heating and Air Conditioning, a division of the Midland-Ross Corporation. Continuing as first vice president is Don Winegardner, vice president of the heating division, The Majestic Company. Harold P. Mueller, Jr., president of the Mueller Climatrol division of Worthington Corporation, was re-elected second vice president. James M. Martin was re-elected secretary-treasurer.

Four new members were elected as trustees. They are Roy C. Brainard, Standard Metal Fabricating Co.; Keith T. Davis, Bryant Manufacturing Co.; Jess L. Moore, Jr., Coleman Co.; Clyde H. Wilkinson, American-Standard Air Conditioning Division.

Retiring members of the board are Homer F. Brundage, Eugene J. Cullen, Wright C. Percival, and H. F. Randolph.

Bangert, A. G. A. Laboratories' controller, retires

EMIL L. BANGERT, controller at the A. G. A. Laboratories, Cleveland, Ohio, recently retired from active service.

Mr. Bangert first began his career in accounting in 1918. Subsequent employment included the Ohio Bell Telephone Company, Singer Sewing Machine Company, and the Coffield Electric Company. He was a resident auditor for the budget and fiscal office of the U.S. Army Air Force during World War II, and one of his assignments from that office was with the A. G. A. Laboratories.

In 1946 he joined the Laboratories' staff. He was named controller in 1949. He has been actively engaged in the rapid expansion of plant facilities and personnel and has been responsible for modernizing the Laboratories' accounting procedures and practices, including the installation of machine accounting.

Mr. Bangert will continue to be available to the Laboratories as a consultant on special administrative activities.

Knapp becomes Pennsylvania-Bradford general manager

RICHARD KNAPP has been appointed to the new post of general manager of Pennsylvania-Bradford Appliance Corp., Philadelphia, Pa. Mr. Knapp had served as a consultant to the company and has an extensive background in sales, merchandising, and general management.

In another change, Stuart Rich, former senior salesman of the firm, has been named sales manager to succeed Harry Lasky, who has resigned. Mr. Rich will be responsible for national sales of the company's products. These products include water heaters and gas dryers.

As isting the new sales manager will be Joseph Kline, who has been named sales administrator. Mr. Kline will be aided by William Schwartz.

Saubert is chairman of board of Great Falls Gas

THE BOARD OF DIRECTORS of Great Falls Gas Co., Great Falls, Mont., has announced that effective January 1, 1961, Henry M. Saubert, president of the company since 1951, is chairman of the board. Earle E. Garrison, who was Ardmore area manager of Oklahoma Natural Gas Company, has become the new president and chief executive officer. J. Patrick Lannan, who was board chairman, has filled the newly created post of chairman of the executive committee.

Mr. Saubert has been associated with Great Falls since 1931 when he was appointed manager. He was a graduate of the University of Wisconsin in 1906, with a degree in mechanical engineering.

Mr. Garrison is a 1936 graduate of the University of Oklahoma with a bachelor-of-science degree in business administration. He joined Oklahoma Natural as a ledger clerk in 1939. After a period of service during World War II, he returned to the company. He was promoted to sales manager of the Muskogee district in 1947 and went to Tulsa as sales promotion manager in 1949. He was promoted to manager at El Reno in 1950 and in 1954 returned to Ardmore as area manager.

Bjork, chairman, chief executive officer, to retire from Peoples Gas Light and Coke

E. I. Bjork

R. McDowell

ESKIL I. BJORK, chairman and chief executive officer of The Peoples Gas Light and Coke Co., Chicago, Ill., will retire March 1, 1961, from that position. He so advised the board of directors of the utility at a recent meeting.

Mr. Bjork recently completed 40 years of service with Peoples Gas. He will continue as a director and will serve as chairman of the executive committee to which position he was elected at the same meeting. He will have an office in the Peoples Gas building. He will relinquish the chairmanship but will continue as a member of the boards of directors of a number of the subsidiaries of Peoples Gas.

Remick McDowell, president and a director of Peoples Gas, was elected to succeed Mr. Bjork when the latter's retirement becomes effective. The directors elected Leslie A. Brandt to succeed Mr. McDowell. Mr. Brandt now is comptroller and a vice president.

Mr. Bjork joined Peoples Gas in 1920 as a ledger clerk, shortly after his return from France where he served with the 42nd (Rainbow) Division in World War I.

After numerous promotions he was elected assistant secretary of the company in 1930. In 1936 he became assistant vice president and assistant comptroller. In 1941 he was named vice president in charge of budgeting, purchasing, and stores, going from that post in 1945 to vice president in charge of finance and industrial relations. He became president in 1952 and chairman and chief executive officer in 1957. He is a director of A. G. A.

Mr. McDowell has been associated with Peoples Gas for 20 years. However, his utility career covers a span of 32 years. He was with Commonwealth Edison Company for 12 years.

Two years after joining Peoples Gas in 1940 as executive assistant to the secretary, he was elected assistant secretary. Later he was successively elected assistant treasurer, secretary, assistant to the chairman, vice president and secretary, vice president, executive vice president in 1957, and president last year.

Peoples Gas directors also elected other officers of the utility to new positions, all changes effective March 1, 1961, with one exception.

Ward C. McCallister, assistant comptroller, will succeed Mr. Brandt and also will be a vice-president.

Wilfred G. Pilgrim will become an assistant vice president, continuing as assistant comptroller.

Elmer F. Schuldt, chief operating engineer, will succeed John J. Novy as assistant vice president, operation division, when Mr. Novy retires February 1, 1961.

Allan J. Good, treasurer, will become an assistant vice president, finance and public relations division.

William H. Hollweg, assistant secretary and assistant treasurer, will succeed Mr. Good. Mr. Hollweg will remain as assistant secretary.

Edwin M. Taber, assistant treasurer and assistant secretary, will become secretary and will continue as assistant treasurer. As secretary, he will occupy one of two positions now filled by Robert M. Drevs, vice president, finance and public relations. Both the secretary and treasurer will report to Mr. Drevs.

NACE selects new officers

NEW OFFICERS for the National Association of Corrosion Engineers, Houston, Texas, have been elected for 1961-1962. E. C. Greco, senior research chemist, United Gas Corp., has been elected president. Rolland McFarland, secretary and technical director, Hills-McCanna Co., has been elected vice president; and C. G. Gribble, Jr., district manager, Metal Goods Corp., has been re-elected treasurer. All officers will be installed March 17, 1961, the last day of the association's 17th annual conference and 1961 corrosion show at Buffalo, N. Y.

Three directors that have been elected include Frank E. Kulman, senior engineer, Consolidated Edison Company of New York; L. W. Gleekman, supervisor of the materials engineering group, Wyandotte Chemicals Corp.; and Fred D. Stull, superintendent of corrosion prevention, Texas Gas Transmission Corp. Mr. Kulman will represent active members of NACE, while Dr. Gleekman and Mr. Stull will represent corporate members. All will serve for three years.

Mr. Greco has played a prominent part in the association's activities, especially in committees doing corrosion investigation. He was vice chairman and later chairman of the NACE technical practices committee. He is the author of technical papers published in *Corrosion*, NACE's official publication.

Mr. McFarland is presently a director of NACE. He was technical program chairman of the 1959 NACE conference. He is a past chairman of the NACE technical committee on organic coatings and linings for resistance to chemical corrosion. For more than 20 years he has been engaged in design and application of pumps, valves, and allied equipment.

Industrial Gas elects Lyne

J. R. LYNE, vice president of Industrial Gas Supply Corporation, has been elected a director and appointed general manager of the firm. Industrial Gas Supply is a wholly-owned subsidiary of Stone and Webster, New York, N. Y.

Mr. Lyne joined Industrial Gas in 1951. Previously he had been associated for many years with the Texas Railroad Commission as district supervisor in Corpus Christi, Texas.

Omaha society honors Merriam, of Northern Natural

JOHN F. MERRIAM, chairman of the board and president of Northern Natural Gas Co., Omaha, Nebr., was recently awarded the civic honor of selection as King Ak-Sar-Ben LXVI of the mythical land of Quivira. He was crowned King at a ball in Omaha's Ak-Sar-Ben Coliseum.

The annual ceremony during which a king and queen are chosen to reign for a year marks the high point of Omaha's social season. The custom has been honored for 66 years in that city. The king is chosen for his business leadership and civic activities.

Mr. Merriam has been with Northern Natural since the year of its incorporation, 1930. He was named director of information in 1931 and in 1939 became secretary and treasurer. His appointment in 1945 as vice president was soon followed by his election as a director. In 1948 he was elevated to the post of executive vice president. He became president of the firm in 1950 and chairman of the board in 1960.

He has served on the military petroleum board that provided the U.S. Defense Department, Department of the Interior, and the Office of Defense Mobilization with counsel on oil and gas matters relating to national security and defense. He is a past president and a director of the Independent Natural Gas Association. He has served as a director of A. G. A. and of the Midwest Gas Association and on the A. G. A. Executive Committee. He was a member of the A. G. A. Promotion, Advertising, and Research Committee.

King Ak-Sar-Ben (which is Nebraska, spelled backwards and hyphenated) LXVI of the mythical Kingdom of Quivira in coronation dress

O'Meara succeeds Carpenter as LP-Gas president

DONALD G. O'MEARA, general sales manager of Pyrofax Gas Corp., New York, N. Y., was elected 1961 president of the National LP-Gas Council at a recent meeting of the council's board of directors in Phoenix, Ariz.

A. B. Ritzenthaler, vice president of The Tappan Company, was elected chairman of the executive committee, and James F. Donnelly, Sr., assistant to the executive vice president of A. O. Smith Corporation, was re-elected secretary-treasurer.

Mr. O'Meara was chairman of the executive committee and has succeeded Frank T. Carpenter, president of United Petroleum Gas Company. Mr. O'Meara is a former chairman also of the council's advertising committee.

New council directors include LeRoy Klein, vice president in charge of sales, Caloric Appliance Corp.; W. G. Wepfer, director of sales, Arkla Air Conditioning Corp.; Glen Oslin, vice president, John Wood Co.; Robert Leitch, vice president, Bottled Gas Corporation of Virginia; William D. Johnson, president, Red Devil Butane Gas Co.; K. H. Koach, president, Green's Fuel; D. C. Morgan, manager of gas products, Rockwell Manufacturing Co.; Harold W. Smith, president, American Liquid Gas Corp.; K. G. Pearce, vice president, Tennessee Oil Refining, division of Tennessee Gas Transmission Co.; Fred Ramsuer, manager of gasoline division, Cities Service Oil Co.; George Hewitt, manager natural gas liquids department, El Paso Natural Gas Co.

Gas division of New England Electric System announces promotions of nine

THE GAS division of the New England Electric System, Malden, Mass., has announced the advancement of nine employees in five subsidiaries of the system.

The directors of Mystic Valley Gas Company have elected Richard L. Fite, Jr., as vice president and manager. Former vice president of Lynn Gas and Electric Company, he has succeeded Everett C. Bryant, who has retired. He joined New England Electric in 1934 as a salesman.

G. Paul Magnitzky has been named assistant manager for Mystic Valley Gas. He has succeeded Ronald P. O'Hanley, who has retired. Mr. Magnitzky is former vice president and director of Wachusett Gas Company, another subsidiary of the system.

Mystic Valley Gas has named Albert K. Peirce as superintendent of utilization. Mr. Peirce first joined the system as a distribution draftsman in 1926. He is former assistant superintendent of utilization.

George C. Ambrose has been named manager of commercial and industrial sales for Mystic Valley Gas. He is a former commercial representative for the company.

Another subsidiary of New England Electric, Northampton Gas Light Company, has elected Paul J. Reynolds as vice president and manager. Mr. Reynolds first joined the system in 1953. His position prior to this appointment was that of superintendent of utilization for Mystic Valley Gas.

Northampton Gas Light has also named Thomas H. Rennell general superintendent of the company. Mr. Rennell joined the system in 1923 as a utility man. He is the former general foreman of the subsidiary.

Wachusett Gas has elected Malcolm C. Macauley as vice president and manager. Prior to this appointment he was assistant manager at North Shore Gas Company. He first joined New England Electric in 1935.

The directors of Lynn Gas have elected Carl W. Schofield, Jr., as vice president and manager. A graduate of Norwich University, Mr. Schofield joined the firm in 1949. He was vice president and director of Northampton Gas Light.

Robert C. Smith, Jr., has been named assistant manager for North Shore Gas. A graduate in 1949 of Dartmouth College, he was previously commercial-industrial supervisor at Mystic Valley Gas.

Wholly owned Arkla subsidiaries elect Taylor, Sullenberger, and Wellborn

ARKANSAS LOUISIANA Gas Co., Shreveport, La., has announced the election of two vice presidents and a director by Arkla subsidiary companies.

They are John E. Taylor, who was elected vice president of Arkansas Industrial Pipeline Corporation; Dave E. Sullenberger, who has become vice president of Arkansas Louisiana Chemical Corporation; and Robert E. Wellborn, who was elected to the board of directors of Reynolds Gas Regulator Company.

These wholly owned Arkla subsidiaries were founded or purchased during the past three years as part of a broad diversification and expansion program adopted by Arkla management in 1957.

Mr. Taylor joined the gas company as a junior engineer in 1930 after graduating from Auburn University, with a bachelor-of-science degree in electrical engineering. He was elected a director of Arkansas Industrial Pipeline when it was formed in 1958.

Mr. Sullenberger began his career with the gas industry in 1945 as a construction clerk in Arkla's gasoline division. In 1953 he became superintendent of the division and was named a director and superintendent of operations for the new chemical subsidiary in 1958.

Mr. Wellborn has been associated with Reynolds Gas Regulator since his appointment last year as general plant manager. An Arkla employee since 1934, he formerly worked as industrial meter and regulator foreman and as division distribution engineer.

Bowen is Houston president

W. J. Bowen

W. J. BOWEN, senior vice president and director of The Houston Corp., St. Petersburg, Fla., has been named president of the pipeline and natural gas company.

The firm's directors elected Leon M. Payne as secretary and chief counsel. Mr. Payne has been serving as a director for the corporation and its subsidiary companies.

The board elected J French Robinson as chairman of the executive committee. Mr. Robinson is the former chairman of Consolidated Natural Gas Company.

Norge appoints Schnipper

A. Schnipper, Jr.

ARTHUR SCHNIPPER, JR., has been appointed as sales manager of refrigerators at the Norge division of Borg-Warner Corp., Chicago, Ill.

He was previously associated with Philco Corporation. During the past 12 years he has held distributor and factory sales and merchandising positions.

Kyle succeeds Biddison

VOLNEY H. KYLE, JR., has been elected president of North Carolina Natural Gas Corp., Fayetteville, N. C., by the firm's board of directors. He has succeeded P. McDonald Biddison, who resigned for reasons of health.

Two new directors also elected are Albert H. Daggett and William C. Gilman.

Mr. Kyle, who steps up to the top position from his previous post as executive vice president, and Mr. Biddison shared major roles in the formation and activation of this concern that introduced natural gas into 31 communities in south-central and eastern North Carolina in 1959.

Mr. Daggett is president and a director of Gould National Batteries and for several years was associated with Stone and Webster. Mr. Gilman is a former director of the public utilities division of the Securities and Exchange Commission, Washington, D. C.

Strauss elected president

W. A. Strauss

NORTHERN NATURAL Gas Co., Omaha, Nebr., has announced the promotion of W. A. Strauss to president and principal operating officer. He will continue to be responsible to John F. Merriam, who remains chairman of the board of directors and chief executive officer of the company. Mr. Strauss has succeeded Mr. Merriam as president.

Mr. Strauss was elected a member of Northern's board of directors and a member of its executive committee. A. B. Dilworth, a senior vice president of Northern and a member of its policy board, was also elected to those positions. Mr. Merriam continues as chairman of the executive committee.

The four senior vice presidents and members of Northern's policy board will continue to report to Mr. Merriam. The office of executive vice president was not filled.

Mr. Strauss has been executive vice president of Northern for several years. Before that, he was administrative vice president for a year. He has been with Northern for 13 years and started in the engineering department.

Purdy becomes PR director

JOSEPH H. PURDY has been appointed director, public relations, of the Baltimore Gas and Electric Co., Baltimore, Md. Reporting to the president, he will be responsible for the planning and coordination of the firm's various public relations activities.

Mr. Purdy is a graduate of Johns Hopkins University. He joined the utility in 1924. Most of his service has been in the customer relations department, and he has been manager of customer relations since 1952.

AHLMA elects Maytag's Ely

CLAIRE G. ELY, vice president, marketing, The Maytag Co., Newton, Iowa, has been elected chairman of the board of the American Home Laundry Manufacturers' Association for 1961.

Fred H. Holt, general manager, home laundry department, General Electric Company, was elected vice chairman of the board. Mason Smith, financial vice president, Whirlpool Corporation, was elected treasurer.

Georgia utility elects Bell

J. A. Bell

JACK A. BELL, former executive vice president of the Gas Light Company of Columbus, Columbus, Ga., was elected president and a director of the company by the board of directors at its recent annual meeting.

Frank D. Foley, former president, was elected chairman of the board.

Other officers elected were Charles K. Oxford, first vice president; S. C. Bishop, vice president and treasurer; Jack M. Averett, vice president engineering; and Mildred N. Pearson, secretary. The law firm of Foley and Chappell was appointed as counsel for the firm.

Directors of the company include, in addition to Mr. Bell and Mr. Foley, Oscar L. Betts, Jr.; Emory K. Crenshaw; Manton S. Eddy; Frank D. Foley, Jr.; C. E. Gates; A. Illges; G. Gunby Jordan; Allison W. Ledbetter; Walter A. Richards; Jacob L. Riley; George P. Swift; D. A. Turner; and W. B. Turner.

Quebec Natural names Maddock

G. O. Maddock

EDOUARD ASSELIN, chairman of the board of directors of Quebec Natural Gas Corp., Montreal, Quebec, Canada, has announced that effective January 1, 1961, he has relinquished the office of president. He has confirmed that he will continue as chairman of the board, a position he has held since the corporation's inception.

Mr. Asselin also announced that Glenn O. Maddock has been named president and chief executive officer. He had since 1944 been associated with Duff and Phelps, Chicago, Ill., a firm of public utility consultants and security analysts. He had for several years been a director, secretary, and vice president of that firm.

Guy Vanier, who is a director, has been appointed a vice president; and C. H. Home has become executive vice president.

Names in the news—a roundup of promotions and appointments

UTILITY

Malcolm Mager has been named assistant superintendent of gas operations of New Bedford Gas and Edison Light Co. He joined the utility in 1948 as an industrial gas engineer and superintendent of the service department. He is a graduate of Northeastern University, with a bachelor-of-arts degree in engineering.

The Brooklyn Union Gas Co. has promoted **Malcolm M. Chesney, Jr.**, to manager of its economic research department. He joined the utility following his graduation from Yale University in 1947.

James Crilly, of Elizabethtown Consolidated Gas Co., has been appointed as superintendent of gas production at the company's manufacturing plant in Elizabeth, N. J. He has succeeded the late **Conrad Walp.** Mr. Crilly has been with the firm since 1945 and was assistant superintendent of dispatching and gas supply at the plant prior to his recent appointment. The Crilly family has been active in the company for three generations.

Robert J. Owens, safety administrator with Pacific Gas and Electric Co., has been appointed safety engineer to succeed **Warren S. Hyde,** who has retired after 41 years of service. Mr. Owens, who has been with the company since 1957, has worked in safety, radiation protection, and occupational health for more than 25 years. A graduate of the University of Colorado, he is a member of the atomic plant safety task force of the Edison Electric Institute's accident prevention committee. Mr. Hyde joined the firm in 1921 and was promoted successively to chemist, inspector of technical services, safety supervisor, and assistant safety engineer. He was named safety engineer in 1954. **Glenn A. Merritt,** who has been appointed the new assistant safety engineer, has been with the company for 27 years. During the past four years he had supervised the driver training and testing program.

Al Gould has been appointed as news director for Northwest Natural Gas Co. His appointment fills a vacancy created when **Merlin Blais** resigned to accept a position with the West Coast Lumbermen's Association. Mr. Gould has been engaged in free lance public relations counseling and advertising counseling in Portland, Ore.

Philadelphia Electric Co. has announced the appointment of **R. S. Diggs** as assistant superintendent of the transmission and distribution engineering division. He has filled the post held by the late **G. H. Jarden. R. L. Cole** has succeeded Mr. Diggs as assistant general superintendent of transmission and distribution in the Philadelphia, Pa., division. **W. G. Walkup** has been named gas superintendent of the Schuylkill division to replace Mr. Cole.

MANUFACTURER

Minneapolis-Honeywell Regulator Co. has announced four executive appointments in its industrial products group. **Nilsson S. Bassett,** sales manager of the Industrial Systems division (IDS), has joined the firm's federal services group as group marketing liaison with government agencies. Succeeding him as IDS sales manager is **John O. Paull,** industrial sales manager of the Pacific region in Los Angeles, Calif. He has been succeeded by **J. F. Smith,** Southwest regional industrial sales manager at Dallas, Texas. **R. E. Harris,** district manager at Tulsa, Okla., has succeeded Mr. Smith. Mr. Bassett joined the firm as a sales engineer in 1947 and became sales manager of IDS in 1958. Mr. Paull, who joined Honeywell in 1946, was made Los Angeles branch sales manager in 1952 and regional manager in 1955. Mr. Smith, during his 13 years with the company, served in several capacities before being named regional manager in 1955. Mr. Harris had been district manager at Tulsa and branch manager at Dallas since joining the company in 1948.

OTHER

Robert N. Curry has been appointed assistant superintendent of dispatching for Texas Gas Transmission Corp. Prior to this appointment he was assistant superintendent of gas measurement. He joined Texas Gas in 1949, the year of his graduation from Western Kentucky State College.

OBITUARY

John E. Glines

superintendent of commercial staff activities for Michigan Consolidated Gas Co., Detroit, Mich., died November 12, 1960. He was 54.

Mr. Glines was a member of A. G. A. and of the Detroit Association of Training Directors.

He is survived by his widow, two daughters, and two grandchildren.

Benton H. Dunbergh

who was 72 and who had served the gas industry for 52 years, died November 14, 1960, in Paterson, N. J. Mr. Dunbergh was the retired Paterson district sales manager of Public Service Electric and Gas Co., Newark, N. J. He retired from service with the utility in 1958.

Surviving him are a daughter and a grandson.

Beni Lione

vice president of The Safety Gas Main Stopper Co., Brooklyn, N. Y., passed away on September 28, 1960.

CONVENTION CALENDAR

1961

FEBRUARY

January 29-2 •National Association of Home Builders, Annual Convention, Convention Hall, Chicago, Ill.

2-3 •National Association of Corrosion Engineers, Houston Section Corrosion Short Course, Rice Hotel, Houston, Texas

9-11 •A. G. A. Home Service Workshop, Cleveland-Sheraton Hotel, Cleveland, Ohio.

13-14 •Second Biennial Mid-Pacific Gas Merchandising Conference, Hawaiian Village Hotel, Honolulu, Hawaii

13-16 •American Society of Heating, Refrigerating and Air-conditioning Engineers, Semi-annual Meeting and Exposition, Chicago, Ill.

14-15 •National Association of Corrosion Engineers, Shreveport Section Annual Corrosion Short Course, Centenary College, Shreveport, La.

23-24 •A. G. A.-Pacific Coast Gas Association Public Relations Workshop and PCGA-Canadian Gas Association-A. G. A. Joint Public Relations Conference, Benson Hotel, Portland, Ore.

MARCH

13-17 •National Association of Corrosion Engineers, Annual Conference and Corrosion Show, Hotel Statler, Buffalo, N. Y.

16-17 •New England Gas Association, Annual Meeting, Statler Hilton Hotel, Boston, Mass.

20-22 •A. G. A. General Management Section, Annual Conference, Francis Marion Hotel, Charleston, S. C.

27-28 •Mid-West Gas Association, Annual Meeting and Convention, Sheraton-Fontenelle Hotel, Omaha, Nebr.

APRIL

2-4 •The Women's Housing Congress, Mayflower Hotel, Washington, D. C.

4-5 •Gas Compressor Institute, University of Kansas, Liberal, Kans.

4-6 •A. G. A. Research and Utilization Conference, Sheraton-Cleveland Hotel, Cleveland, Ohio

7 •Maryland-District of Columbia Utilities Association, Spring Conference, Lord Baltimore Hotel, Baltimore, Md.

11-13 •A. G. A. Sales Conference on Industrial and Commercial Gas, Prince Edward, Windsor, Ontario, Canada

13-15 •Gas Appliance Manufacturers Association, Annual Meeting, Boca Raton Hotel and Club, Boca Raton, Fla.

Personnel service

SERVICES OFFERED

Corrosion Engineer—B.S. degree in Electrical Engineering. Ten years supervisory. Diversified experience with transmission and distribution companies in engineering, design and construction. Resume and references on request. Age 38. **2001.**

Construction Engineer-Superintendent—experienced in construction of heavy steel and concrete structures. Marine wharves, steel bridges, pipelines, petroleum storage tanks, pumping stations, and maintenance thereof. Capable of assuming full responsibility from inception to completion of project. Will relocate. **2002.**

Sales Management and Marketing—Successful and productive accomplishment for 20 consecutive years in sales executive and service management areas with same leading national GAMA member corporation. Engineering background combined with creative sales-promotion and advertising ability, plus extensive sales management and administrative responsibilities provides exceptional experience background. Currently marketing consultant. Seeking gas industry reassociation offering challenging opportunities and growth potential. Available as consultant during proof-demonstration period or as full-time staff member. Complete resume on request. Salary open. Will relocate. **2003.**

Management—recent vice president and general manager of natural gas utility. Twenty-four years in management, public relations, engineering, distribution, transmission, sales and service. Living in Mid-west. Married, three children. **2004.**

Supervisory and Management—experience local level. Customer's accounting, auditing and all related duties. Twenty years' experience, early forties. Detailed resume upon request. **2005.**

Administrator—gas utility executive, age 55, in good health and 25 years' experience in operations, engineering, labor relations and management in gas distribution companies desires position with medium size utility. Location and salary negotiable. Available on short notice. **2006.**

Treasurer-Controller—of small distribution company desires change to challenging position in active company with growth problems. CPA, age 35, with eleven years of big-company background in public accounting, production, transmission, storage and distribution. Heavy experience in securities issuance and public relations. $12,000 to $15,000. **2007.**

Staff Assistant-Personnel or Operations—ten years' gas and electric utility experience. Heavy in personnel administration, also interested in distribution, or staff assistant to management. College graduate. BS industrial economics, minors EE and GE. Age 38. Will relocate. Salary open. Complete resume on request. **2008.**

Interested in position in **Research and Development Department of Appliance Manufacturer.** Eight years' experience in design, development and testing of gas, oil and electric lines. **2009.**

Graduate Chemical Engineer—12 years' broad experience in natural gas industry in the U. S. and overseas wishes engineering/management position with consulting firm or operating company. Have designed, constructed, operated, and managed complete gas distribution and transmission systems. Also operated water distribution system and familiar with electrical distribution. Held positions of chief engineer and operating division manager. Prefer location in western U. S. or overseas. **2010.**

Air Conditioning Sales, Management—broad experience product, auxiliaries systems at staff and field levels. Specialist in sales approach simplification, salesman progress evaluation; clinical workshops for engineers, dealers, utility local office personnel. Worked east, midwest, south. No location or travel limitations. **2011.**

Sales Engineer—11 years' experience in promoting heating and air conditioning equipment. Working at all levels, dealer wholesale and utility. Thoroughly familiar with boiler conversions, commercial gas application, and all surveys. Married, family, age 35. Degree in mechanical engineering. Resume on request. Willing to relocate. **2012.**

Exploration Geologist—M.S. degree. Sixteen years all phases of subsurface geology with two major oil companies in responsible line and staff positions. Mid-continent, Texas, Eastern, and Rocky Mountains. Married, age 44, relocation welcome. Resume and references on request. **2013.**

POSITIONS OPEN

Supervisor-Fluid Flow Research—to provide advice and guidance on problems and applications to the operating divisions, and advise and make recommendations on plans and policies for utilization of fluid flow phenomena throughout the corporation. Salary $14,500. Age, under 45. **0957.**

Sales Manager—for electric and gas water heaters with one of the large manufacturers. Salary $15,000 to $20,000. Age 35 to 45. **0958.**

Gas Distribution Superintendent—for 30,000 meter industrial area. Degree and some engineering experience are desirable. Strong supervisory ability necessary. Location, midwest. All replies will be held in confidence. **0959.**

Sales Representative—excellent opportunity for aggressive sales organization with background in gas-fired hydronic heating and cooling equipment now calling on jobbers, contractors, architects, builders and utilities. Able to organize sales meetings and render technical field service. Territories open in Richmond, Cleveland, Birmingham, Memphis and Louisville. Applications held in strict confidence. **0961.**

Instrument Application Engineer—major New England instrument manufacturer expanding activity in gas distribution and transmission industry has opening for graduate electrical or mechanical engineer in application engineering department. Several years' experience in gas industry desired. Should have interest in working with our field engineers and customers on telemetering and other instrument problems. Age 24-36. Located at main plant. Some traveling. Send resume. **0962.**

Meter Reader Supervisor—expanding Great Lakes utility seeks man with meter reading and supervisory experience for new office. Will supervise work of 25 men and administer office procedure. Excellent starting salary and full benefits. Submit resume including age, education, experience, and salary desired. All replies confidential. **0963.**

Engineers—Philadelphia utility with divisions in eastern Pennsylvania can use three engineers on distribution work. Would prefer men with supervision experience. Give details of education and experience in reply. **0964.**

Industrial Engineer—long established utility desires permanent services of combustion engineer. Must be college engineer graduate, five years' experience in combustion engineering field. Send resume including photograph with first reply to Northwest Natural Gas Co., Personnel Office, 132 N.W. 2nd & Flanders, Portland, Ore. **0965.**

Gas Promotion Engineer—engineering degree preferred with at least two years' experience in the industrial, commercial and central house heating, air-conditioning and miscellaneous appliances, covering gas sales, engineering, supervisory installation and service. Must be thoroughly experienced in preparing heating and air-conditioning surveys and selling gas equipment for the promotion of gas sales. Starting salary, $520-630 per month. Maximum age, 35. Send full resume to Director of Personnel, City of Pensacola, Pensacola, Fla. **0966.**

Bryant promotes Schuyler

A. L. Schuyler

ANDREW L. (AL) SCHUYLER has been promoted to boiler product manager of Bryant Manufacturing Co., Indianapolis, Ind.

Mr. Schuyler joined Bryant in 1956 as a sales manager and has been active in heating engineering since his graduation from the University of Illinois in 1950. His first appointment with Bryant was as sales manager of the Mt. Hawley division.

Reynolds appoints Armstrong

D. L. Armstrong

DONALD L. ARMSTRONG has been appointed to direct the engineering activities of Reynolds Gas Regulator Co., Anderson, Ind. He has succeeded George Hughes, former chief engineer, who recently resigned to accept another position in the gas industry.

Mr. Armstrong will direct both research and application engineering for the 68-year-old firm.

A. V. Leudemann retires

A. V. Leudemann

A. V. LEUDEMANN, general sales manager, Mears-Kane-Ofeldt, manufacturers of package boilers, recently retired after 40 years with the company to become a consultant in the small-boiler field.

Long known as an authority on gas-fired boilers, he has given many years of voluntary service to A. G. A.'s Industrial and Commercial Gas section. He has served for 16 years as a member of section committees concerning themselves with boilers, has presented three outstanding papers at section sales conferences, and has been a lecturer at four Industrial Gas Schools.

Mr. Leudemann is a member of the American Society of Mechanical Engineers and of the A. G. A. Hall of Flame.

United Engineering Trustees elect Thompson president

UNITED ENGINEERING TRUSTEES, New York, N. Y., an organization of five major national engineering societies, has announced the election of Willis F. Thompson as president.

Mr. Thompson, executive vice president of Westcott and Mapes, and a former vice president of the American Society of Mechanical Engineers, has succeeded Andrew Fletcher, of St. Joseph Lead Company.

A. G. A. advisory council

E. J. BOOTHBY.....Washington, D. C.
F. D. CAMPBELL.....Cambridge, Mass.
O. S. CARPENTER.....Houston, Texas
MARVIN CHANDLER.....Aurora, Ill.
C. E. CLOUD.....Little Rock, Ark.
SHELDON COLEMAN.....Wichita, Kan.
C. V. COONS.....New York, N. Y.
STUART COOPER.....Wilmington, Del.
R. E. CRAWFORD.....Minneapolis, Minn.
H. WILLIAM DOERING..Springfield, Mass.
C. H. GUEFFROY.....Portland, Ore.
L. C. HARVEY.....Syracuse, N. Y.
H. HANSELL HILLYER.....Savannah, Ga.
ROBERT A. HORNBY..San Francisco, Calif.
J. T. INNIS.....Omaha, Nebr.
F. A. KAISER.....Detroit, Mich.
JULIUS KLEIN.....Jenkintown, Pa.
D. C. LUCE.....Newark, N. J.
W. T. LUCKING.....Phoenix, Ariz.
W. G. MAGUIRE.....New York, N. Y.
C. L. MAY.....Dallas, Texas
V. T. MILES.....Mineola, N. Y.
D. H. MITCHELL.....Hammond, Ind.
W. E. MUELLER....Colorado Springs, Colo.
S. H. NICHOLS.....New York, N. Y.
R. W. OTTO.....St. Louis, Mo.
E. A. NORMAN.....Columbus, Ohio
J. C. PETERSON.....Pittsburgh, Pa.
C. P. RATHER.....Birmingham, Ala.
W. F. ROCKWELL, JR.....Pittsburgh, Pa.
E. H. TOLLEFSON.....New York, N. Y.
G. F. WATTERS.....Syracuse, N. Y.
J. THEODORE WOLFE.....Baltimore, Md.
D. K. YORATH...Edmonton, Alta., Canada

PAR COMMITTEE

Chairman—Richard A. Puryear, Alabama Gas Corp., Birmingham, Ala.

General Promotional Planning Committee
Chairman—Frank M. Foster, Southern California Gas Co., Los Angeles, Calif.

General Research Planning Committee
Chairman—Fred W. Batten, The Columbia Gas System Inc., New York, N. Y.

General Public Information Planning Committee
Chairman—R. J. Rutherford, Worcester Gas Light Co., Worcester, Mass.

FINANCE COMMITTEE

Chairman—James Comerford, Consolidated Natural Gas Co., New York, N. Y.

LABORATORIES MANAGING COMMITTEE

Chairman—William J. Harvey, Public Service Electric and Gas Co., Newark, N. J.

APPROVAL REQUIREMENTS COMMITTEE

Chairman—R. I. Snyder, Southern California Gas Co., Los Angeles, Calif.

Associated organizations

CANADIAN GAS ASSOCIATION
Pres.—R. C. McPherson, Canadian Western Natural Gas Co., Ltd., Calgary, Alberta.
Man. Dir.—W. H. Dalton, 2532 Yonge St., Toronto, Ontario.

GAS APPLIANCE MANUFACTURERS ASSOCIATION
Pres.—Wendell C. Davis, Cribben and Sexton Co., Chicago, Ill.
Man. Dir.—Harold Massey, 60 East 42nd St., New York, N. Y.

FLORIDA NATURAL GAS ASSOCIATION
Pres.—John T. Bills, Peoples Gas System of Florida, North Miami, Fla.
Sec.-Tr.—H. H. Phipps, The Houston Corp., St. Petersburg, Fla.

GAS AND PETROLEUM ASSOCIATION OF ONTARIO
Pres.—J. W. Ostler, Canadian Meter Co., Ltd., Milton, Ontario.
Sec. and Asst. Tr.—H. B. Fry, United Gas Ltd., Hamilton, Ontario.

INDIANA GAS ASSOCIATION
Pres.—Carl D. Rees, Northern Indiana Public Service Co., Hammond, Ind.
Sec.-Tr.—R. A. Steele, Citizens Gas & Coke Utility, 2020 N. Meridian St., Indianapolis, Ind.

MARYLAND-DISTRICT OF COLUMBIA UTILITIES ASSOCIATION
Pres.—H. Holmes Vogel, Chesapeake & Potomac Telephone Co., Washington, D. C.
Sec.—Robert C. Carder, 55 East Washington St., Hagerstown, Md.

MICHIGAN GAS ASSOCIATION
Pres.—A. V. Brashear, Michigan Consolidated Gas Co., Detroit, Mich.
Sec.-Tr.—M. G. Kendrick, Michigan Consolidated Gas Co., Detroit, Mich.

MID-WEST GAS ASSOCIATION
Pres.—J. S. Mayer, Northern States Power Co., Minneapolis, Minn.
Sec.-Tr.—James J. Finnegan, 1163 Northwestern Bank Bldg., Minneapolis, Minn.

NEW ENGLAND GAS ASSOCIATION
Pres.—Gilbert J. Williams, The Connecticut Light & Power Co., Berlin, Conn.
Man. Dir.—Clark Belden, 10 Newbury St., Boston, Mass.

NEW JERSEY GAS ASSOCIATION
Pres.—W. Daniel Williams, New Jersey Natural Gas Co., Asbury Park, N. J.
Sec.-Tr.—Ralph E. Martin, New Jersey Natural Gas Co., Asbury Park, N. J.

PACIFIC COAST GAS ASSOCIATION
Pres.—H. G. Dillin, San Diego Gas & Electric Co., San Diego, Calif.
Man. Dir.—Robert D. Scott, 870 Market St., San Francisco, Calif.

PENNSYLVANIA GAS ASSOCIATION
Pres.—E. H. Smoker, The United Gas Improvement Co., Philadelphia, Pa.
Sec.—H. F. Dimmler, Philadelphia Electric Co., Philadelphia, Pa.

PENNSYLVANIA NATURAL GAS MEN'S ASSOCIATION
Pres.—James E. Coleman, The Manufacturers Light & Heat Co., Pittsburgh, Pa.
Sec.-Tr.—P. L. Kesel, Carnegie Natural Gas Co., Pittsburgh, Pa.

ROCKY MOUNTAIN GAS ASSOCIATION
Pres.—Glenn Waddell, Independent Gas Service, Inc., Denver, Colo.
Sec.-Tr.—H. P. Risley, Public Service Company of Colorado, Denver, Colo.
Field Sec.—Roy G. Munroe, Rm. 16, 1300 Glenarm St., Denver, Colo.

SOUTHEASTERN GAS ASSOCIATION
Pres.—T. W. Yarbrough, Piedmont Natural Gas Co., Inc., Greensboro, N. C.
Sec.-Tr.—Edward W. Ruggles, North Carolina State College, Raleigh, N. C.

SOUTHERN GAS ASSOCIATION
Pres.—James A. Wilson, United Gas Corp., Houston, Texas.
Man. Dir.—Robert R. Suttle, 1524 Life of America Building, Dallas, Texas.

WISCONSIN UTILITIES ASSOCIATION
Pres.—Harry I. Miller, Wisconsin Public Service Corp., Milwaukee, Wis.
Man. Dir.—Dale F. Hansman, Empire Building, Suite 522, 710 North Plankinton Ave., Milwaukee, Wis.

INTERNATIONAL GAS UNION
Pres.—Bengt M. Nilsson, Pres. The Swedish Gas Assn., Stockholm, Sweden.
Gen. Sec.—R. H. Touwaide, 4 Ave. Palmerston, Brussels 4, Belgium.

American Gas Association

HEADQUARTERS 420 LEXINGTON AVE., NEW YORK 17, N. Y.
MUrray Hill 3-8200

A. G. A. LABORATORIES • 1032 East 62nd Street, Cleveland 3, Ohio • 1425 Grande Vista Avenue, Los Angeles, Calif
ENdicott 1-0475 ANgeles 1-8161

WASHINGTON OFFICE • 1725 Eye St. N.W., Washington 6, D. C.
FEderal 7-6630

Officers

*President	LESTER T. POTTER	Lone Star Gas Co., Dallas, Texas
*First Vice-President	EDWARD H. SMOKER	The United Gas Improvement Co., Philadelphia, Pa.
*Second Vice-President	JOHN E. HEYKE	The Brooklyn Union Gas Co., Brooklyn, N. Y.
*Treasurer	CHARLES H. MANN	The Columbia Gas System, Inc., New York, N. Y.
Assistant Treasurer	LAWRENCE VOSE	Columbia Gas System Service Corp., New York, N. Y.
Assistant Treasurer	WILLIAM I. THOMPSON	Columbia Gas System Service Corp., New York, N. Y.
*Managing Director	CHESTER S. STACKPOLE	American Gas Association, New York, N. Y.
Secretary	JAC A. CUSHMAN	American Gas Association, New York, N. Y.

Directors

*Immediate Past President	WISTER H. LIGON	Nashville Gas Co., Nashville, Tenn.	
*ESKIL I. BJORK	Chicago, Ill.	RALPH T. McELVENNY	Detroit, Mich.
H. D. BORGER	Pittsburgh, Pa.	*E. CLYDE McGRAW	Houston, Texas
WENDELL C. DAVIS	Chicago, Ill.	GERALD T. MULLIN	Minneapolis, Minn.
H. REID DERRICK	St. Louis, Mo.	S. LLOYD NEMEYER	Milwaukee, Wis.
BUELL G. DUNCAN	Charlotte, N. C.	DALE B. OTTO	Asbury Park, N. J.
W. M. ELMER	Owensboro, Ky.	*ED PARKES	Shreveport, La.
*ROBERT E. GINNA	Rochester, N. Y.	JOHN C. PARROTT	Roanoke, Va.
ELISHA GRAY II	St. Joseph, Mich.	JOHN W. PARTRIDGE	Charleston, W. Va.
*WILLIAM G. HAMILTON, JR.	Philadelphia, Pa.	B. T. PERSON	Denver, Colo.
WILLIAM J. HARVEY	Newark, N. J.	A. B. RITZENTHALER	Mansfield, Ohio
HALL M. HENRY	Cambridge, Mass.	CHARLES M. STURKEY	Seattle, Wash.
A. W. JOHNSTON	Boston, Mass.	N. R. SUTHERLAND	San Francisco, Calif.
*OAKAH L. JONES	Toronto, Canada	*GUY W. WADSWORTH, JR.	Los Angeles, Calif.
ROY E. JONES	Waukegan, Ill.	S. D. WHITEMAN	Hastings, Nebr.
OTTO W. MANZ, JR.	New York, N. Y.	*JOHN H. WIMBERLY	Houston, Texas

Section Chairmen

Accounting Section	REINHOLD H. JOHNSON, The Brooklyn Union Gas Co., Brooklyn, N. Y.
General Management Section	GORDON C. GRISWOLD, The Brooklyn Union Gas Co., Brooklyn, N. Y.
Industrial and Commercial Gas Section	L. J. FRETWELL, Oklahoma Natural Gas Co., Tulsa, Okla.
Operating Section	HERMAN L. FRUECHTENICHT, Consumers Power Co., Jackson, Mich.
Residential Gas Section	J. J. McKEARIN, Laclede Gas Co., St. Louis, Mo.

Association Staff

Managing Director	CHESTER S. STACKPOLE	Director of PAR Plan	S. F. WIKSTROM
Assistant Managing Director	JOHN W. WEST, JR.	Director, Promotion and Advertising and Secretary, Residential Section	NORVAL D. JENNINGS
Assistant to the Managing Director	HAROLD S. WALKER, JR.	Advertising Manager	KENNETH F. MULDOON
Director, A. G. A. Laboratories	FRANK E. HODGDON	Promotion Manager	LEONARD M. HAMMEL
Manager, Pacific Coast Laboratory	W. H. VOGAN	Manager, Home Bureau	GERALD P. MULLINS
Secretary and Convention Manager	JAC A. CUSHMAN	Manager, Commercial Promotion	HAYES S. WALTER
Librarian	EDITH W. FINCH	Director, Research	THOMAS LEE ROBERTS
Controller	ROBERT J. CUTTING	Research Consultant	DR. N. K. CHANEY
Secretary, Accounting Section	THOMAS J. SHANLEY	Director, Public Information	JAMES M. BEALL
Secretary, General Management Section	VAUGHAN O'BRIEN	Southern Regional Mgr., Dallas, Texas	RAYMOND B. COOPER
Safety Manager	RAUEL N. PAPICH	Midwest Regional Mgr., Grosse Pointe, Mich.	PAUL INSKEEP
Secretary, Industrial and Commercial Section	RALBERN H. MURRAY	Eastern Regional Mgr., Forest Hills, N. Y.	ROBERT N. LAIRD
Secretary, Operating Section	J. STANFORD SETCHELL	Mgr., Hollywood Bureau	H. D. NICHOLSON
Home Service Counselor	ELLEN BRIDGES	Manager, Washington Office	CURTIS MORRIS
Director, Bureau of Statistics	THEODORE I. GRADIN	Utilization Engineer, Washington	SEWARD ABBOTT
Director, Utilization Bureau	C. GEORGE SEGELER		

* EXECUTIVE COMMITTEE OF THE BOARD OF DIRECTORS.

PRINTED IN U. S. A.